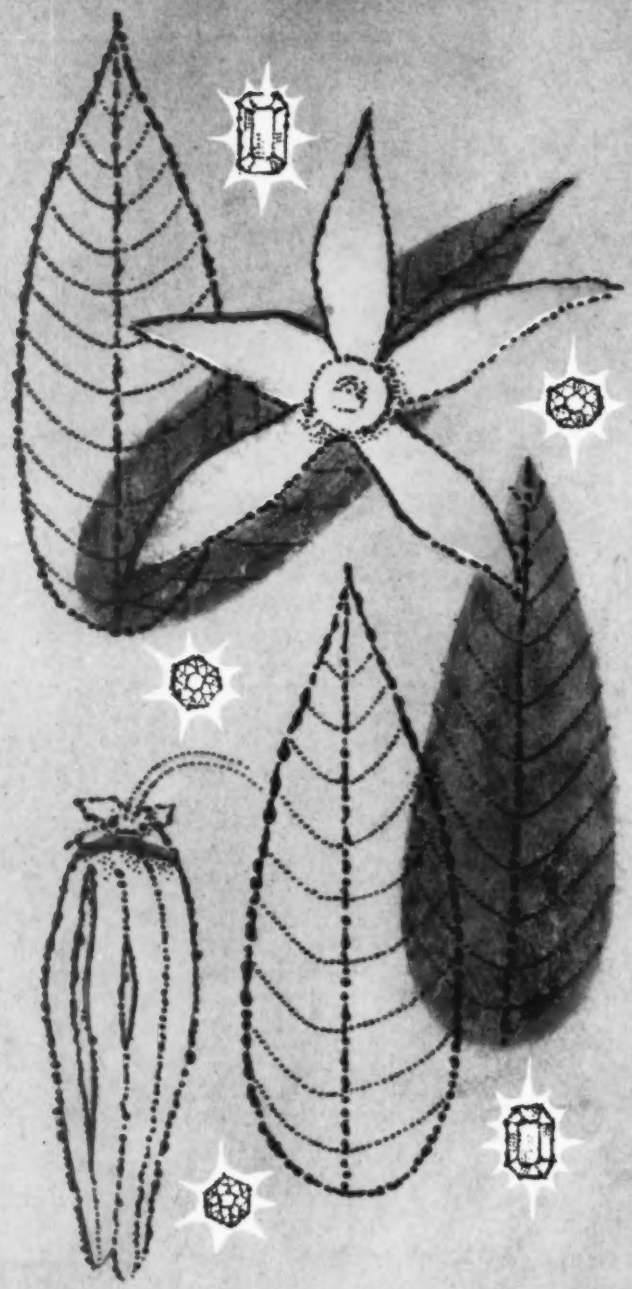
American Perfumer AND AROMATICS

COSMETICS
TOILETRIES
SOAPS
•
FLAVORS
AEROSOLS
•
ESSENTIAL OILS

In Two Sections
SECTION 1

JULY 1958

THE MAGAZINE OF TASTE AND SCENT



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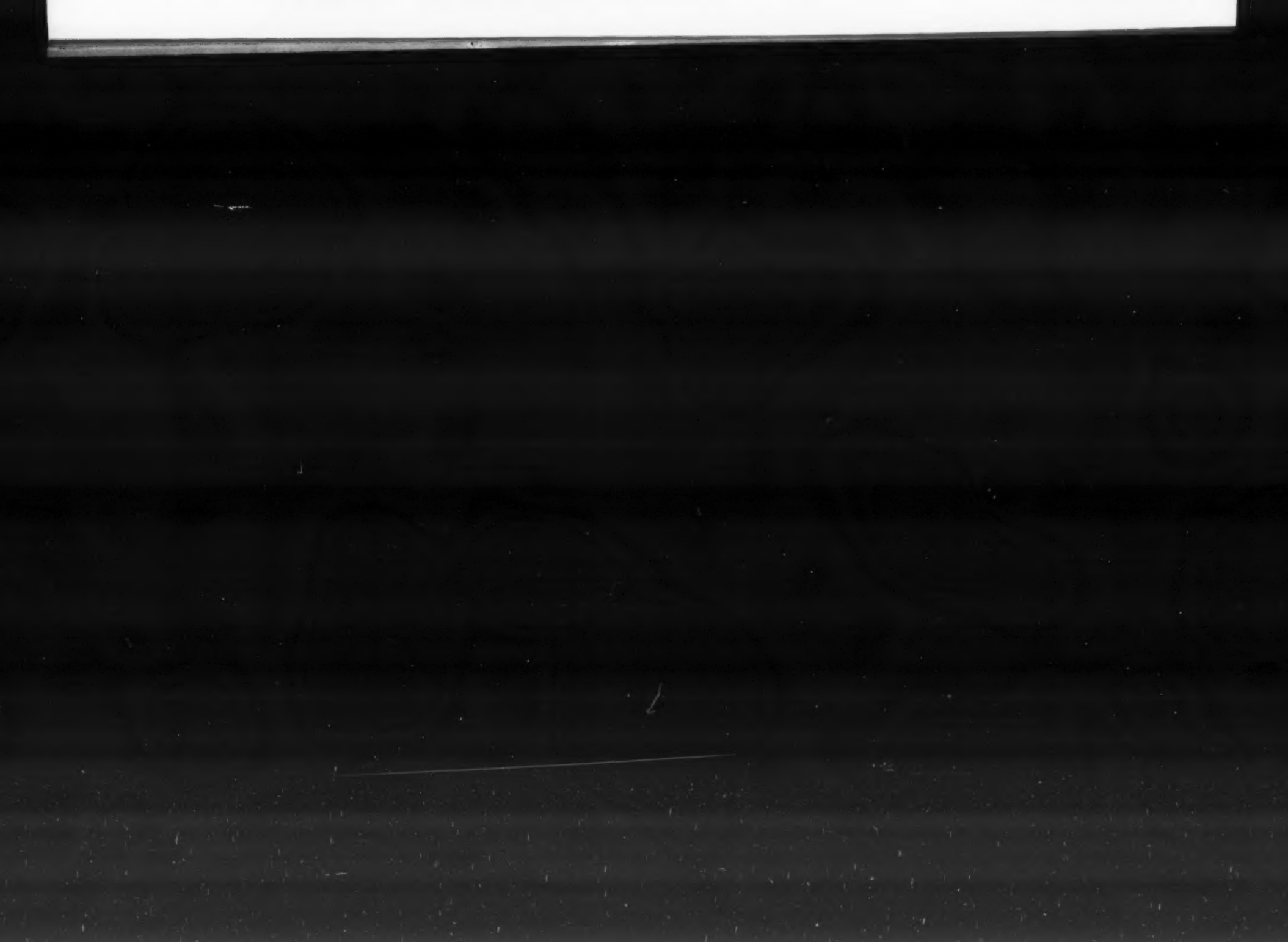

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For men only—Felton's vigorous new perfume group is yours to command. Again, Felton's unique combination of experience, skill and instinct has achieved the unmistakable *eau de success*. Here are all the lures you require for tracking down today's tremendous masculine market.

For big game . . . **Beau Brummel #1256,** a he-man odor with distinctive woody, dry bottom note. **Esquire S.T. #20** and **Esquire Country #20** appeal to aristocratic tastes, an original aroma with beautiful dry notes.

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contents:

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VOL. 72, NO. 1

JULY, 1958

American Perfumer AND AROMATICS

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(Cable Address: Robinpub, N. Y. Volume 72, No. 1.

Why..."Encyclopedia of cosmetic material trade names"?

First, let it be known that the title, as lengthy and wordy as it is, does not begin to describe the full content and function of this great reference work by the eminent deNavarre.

To be sure, it presents a comprehensive, never-before published, **international** listing of more than 3000 cosmetic material trade names.

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Obviously, this Encyclopedia, because of its definitive content and function, because of its finger-tip reference and cross-reference features, because it does represent the answer to a long felt growing need, will serve its highly selective subscribers not only well but over and over again for years and years to come.

426 pages, 6" x 9", clothbound, shipped postpaid anywhere in the world at **$7.50 per copy.** To order copies, write Book Division, **American Perfumer & Aromatics, 48 West 38th Street, New York 18, New York, U. S. A.**

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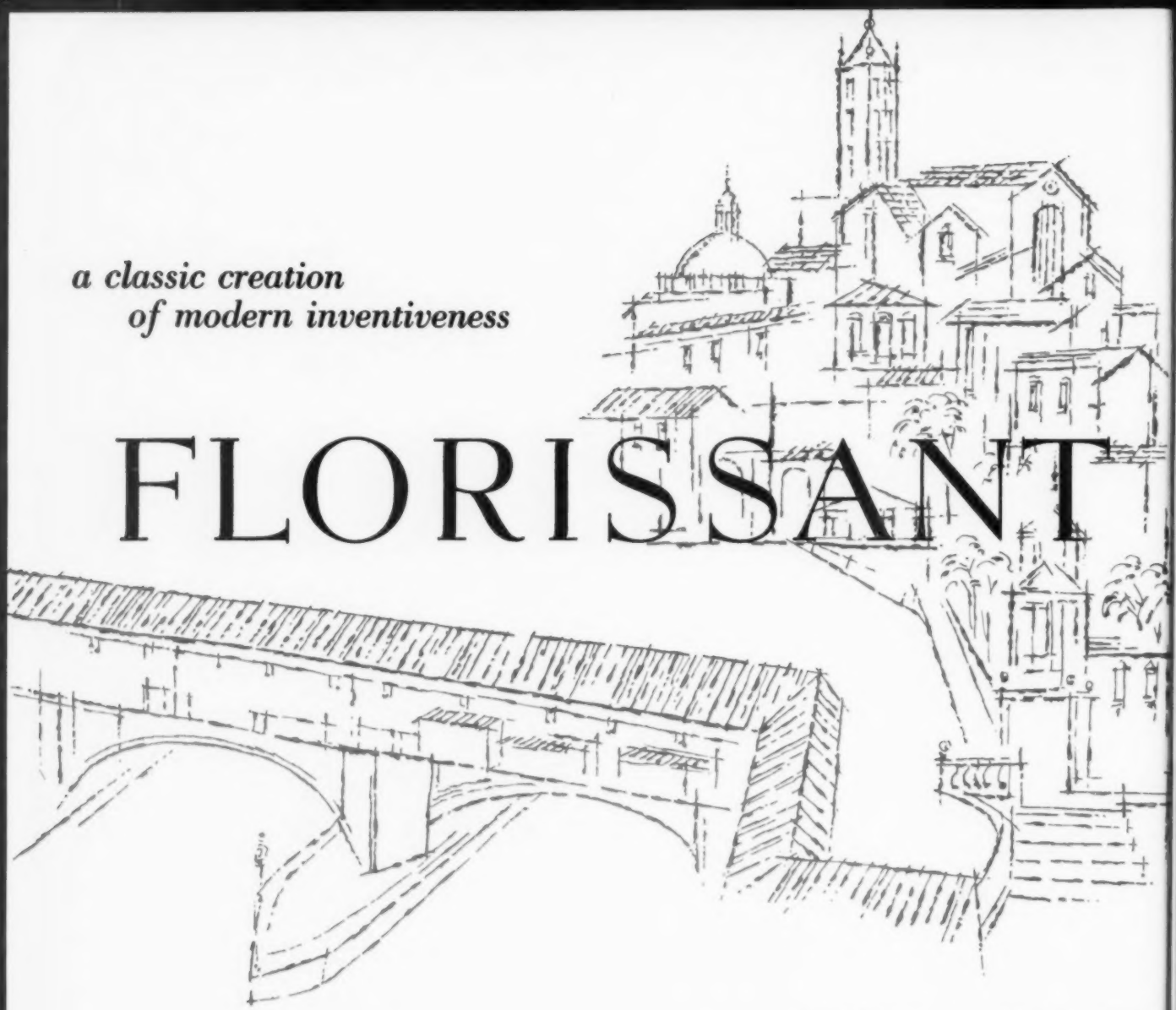

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LAST MINUTE NEWS . . .

Sales Up to New Record; Helene Curtis Profits Down

Despite a 14% increase to a record high in sales Helene Curtis Industries Inc., Chicago, Ill. heavy recurring expenses caused a sharp dip in profits for the year ended February 28, 1958. The company had net sales of $48,826,763, an increase of $6,736,600 over 1957, but net profits were $502,198. Gerald Gidwitz, chairman of the board, stated that reduced earnings were due almost entirely to the cost of acquiring the Lentheric line of toiletries in October 1956.

Last of Revson Brothers Out of Revlon Inc.

Charles Revson, president of Revlon Inc., has announced the resignation of his brother Martin Revson, executive vice president and director. His other brother Joseph resigned some years ago. Charles R. Lackman, vice president, is now the only remaining one of the group which with Mr. Revson developed the company into its present gigantic proportions. The company was founded in 1932 and in 1957 its sales were over $95,000,000, making it the second largest company in the industry in point of sales. Following the resignation of his brother Martin which was reported to be for personal reasons, President Charles Revson announced new appointments. William Mandel was promoted from advertising manager to assistant to the president. William Siegel, formerly of Coty Inc., was appointed advertising manager. David North was appointed product advertising manager.

A. M. A. to Hold Second conference on Uniform Labeling Law

The American Medical Assn. will hold the second in a series of conferences to discuss model legislation for labeling hazardous substances at the association headquarters 535 N. Dearborn St., Chicago, Ill. July 25. The association's committee on toxicology has sent invitations to more than 60 organizations representing trade associations, toxicity testing laboratories and other groups. The Uniform Hazardous Substances Act drafted by the committee is intended to close the gap in label legislation. Bernard E. Conley, Ph. D., secretary of the committee on toxicology of the A. M. A. has pointed out that existing legislation shows a sketchy, non-uniform and generally inadequate pattern of labeling regulations at state and national levels; and that 90% of the states lack requirements for the precautionary labeling of commercial as well as household chemical products.

Short Course at Princeton on Soap and Detergent Technology

Some of the latest trends in the technology of soaps and detergents will be covered in talks at the short course planned by the American Oil Chemists Society July 14-18 at the Princeton Inn, Princeton, N. J. The course is intended to "update" experienced personnel. Specialty surfactants especially will be reviewed.

Thurston & Braidich Sold to Morningstar-Paisley Inc.

The 102 year old firm of Thurston & Braidich, New York, N. Y., which has been serving the flavor and cosmetic industries ever since it was founded, has been sold to Morningstar-Paisley Inc., New York, N. Y., which was founded in 1851. The sale involved an undisclosed amount of money. Thurston & Braidich is believed to be the oldest gum importer and processor in the United States. It was a large importer of vanilla beans and Edward Buckley, one of the owners of the company and a former president of the Vanilla Bean Assn., was decorated by the French government for his service to the industry during the war. Morningstar-Paisley Inc. is the outgrowth of the Morningstar-Nicol Co. which merged with Paisley Products Co. and later purchased the gum department of Innes Speiden & Co. which was owned by the International Minerals and Chemical Corp. Thurston & Braidich will be operated as a division of Morningstar-Paisley Inc. Offices will be transferred to the Morningstar-Paisley quarters and manufacturing will be carried out in the company's gum processing plant in Hawthorne, N. J.

Italian Citrus Crop Adversely Affected by Spring Weather

Charles Pisano, president of the Citrus & Allied Essential Oils Co., Brooklyn, N. Y., who has returned from a two and a half month trip to Europe investigating conditions at first hand, spent considerable time in Sicily which included a visit to the Bergamot Consortium. As a result of cold and rainy weather this Spring in Sicily, which is unusual for that island in the pre-Summer months, he reported that the citrus crop for this year has been adversely affected. Mr. Pisano, who was accompanied by Mrs. Pisano, also visited Grasse and Paris, France, and after a stay in Holland went to the Brussels World's Fair and then to England before returning to the United States.

Samuel Rubin Launches 5% Plan to End Recession

With the aim of pouring at least 20 billion dollars of fresh spending money into the national economy Samuel Rubin, president of Faberge Perfumes Inc. has devised an economic plan to end the recession which has been adopted by the city of Ridgefield, N. J. where his company has its principal American plant. It is called the "Ridgefield 5% Plan" and so far judging from reports of its progress over the radio it is meeting with success. To succeed however the plan must be adopted by community after community across the country. This is how the plan works: Industry pledges 5% of its plant value for immediate improvements; home owners pledge to spend 5% of the value of their homes on repairs; wage earners pledge to spend 5% of the annual wage or 5% from savings to repair and beautify their homes; retail and service business reduces present prices 5% to encourage buying; labor contributes 5% more work time; banks reduce interest rates by 5% and encourage withdrawal of 5% from savings accounts.

Courses in Cosmetic Chemistry Offered by Columbia University

The College of Pharmacy of Columbia University will offer a course in cosmetic chemistry beginning in September. The course is designed to provide those interested in, or already employed in the cosmetic and pharmaceutical industries with the fundamentals of cosmetic technology. The course will meet one evening each week for two semesters and will include laboratory sessions. The curriculum will cover the theoretical basis and practical applications of cosmetic formulation. Discussions will be concerned with such areas as skin structure and function, emulsion technology, components of cosmetics and cosmetic formulation. The enrollment will be limited to twenty students. Interested individuals should contact Prof. Leonard Chavkin at the College of Pharmacy, 115 West 68th St., New York 23, N. Y., for additional information.

Free Subway Ride in New York for Three Soap Coupons

To bolster its sagging revenues and to induce more people to ride in the subways of New York City the Transit Authority joined hands July 1 with B. T. Babbitt Inc. in an attempt to get more riders. Special coupons are attached to five of the B. T. Babbitt detergent products sold in the metropolitan area. Three of the coupons will entitle the purchaser to a free subway or bus ride. Subway riders exchange the coupons for tokens at the subway change booths. Bus passengers give them to the drivers of the Transit Authority buses. The coupon bearing products will be on sale through September 30 but coupons can be used for fares through December 31. For each coupon collected by the subway change makers or bus drivers B. T. Babbitt Inc. will pay the Transit Authority 5 cents; so it will not lose anything. The Babbitt products that carry coupons are: Glim, a liquid detergent; Bab-O, a cleanser; Hep, an oven cleaner; Airgene, a spray deodorant; and Cameo, a copper cleaner.

Charles Fischbeck Retires After 47 Years of Service

Charles Fischbeck, one of the best known men in the essential oil and aromatic chemical industry, retired July 1 after 47 years of continuous service in the industry. In 1911 he joined Ungerer & Co. with whom he was associated for 25 years when he left to establish his own company, the Charles Fischbeck Co. dealing in essential oils. In November of 1944 his firm was merged with P. R. Dreyer Inc. and then Mr. Fischbeck joined the organization of the George Uhe Co. with whom he has been associated for almost 14 years. His associates in the George Uhe Co. gave him a testimonial dinner at the Little Venice restaurant, New York, June 26. Tributes to Mr. Fischbeck were paid by George Uhe, Gilbert Schuster, Edward Polak, John Brody, Harold van Arsdale and Lloyd Fischbeck. Mr. Fischbeck, who resides in Short Hills, N. J., plans to enjoy a much needed and well-earned vacation before announcing any plans he may have for the future.

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Superior skill, artistry, creative imagination, knowledge of consumer preferences...these are the foundations on which a successful perfume or cologne is built. But...an aerosol fragrance requires even more.

Givaudan offers a complete line of perfume and cologne fragrances which have been specifically prepared to meet the requirements of pressure packaging. Or, we can custom-make a fragrance to meet your specific aerosol needs.

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And the best way to insure effective, dependable deodorant and anti-perspirant performance is to depend on *Reheis* for your basic ingredient. Your own merchandising program introduces the customer to her first purchase of your product. Superior performance is all important in selling the second.

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CHLORHYDROL (aluminum chlorhydroxide complex)—for anti-perspirant creams, lotions, sprays and powders.

CHLORACEL (sodium aluminum chlorhydroxy lactate complex)—available as a 40% w/w solution for use in making Cologne type sticks.

Reheis can tailor any one of their anti-perspirant chemicals to meet the needs of your products. We suggest you write for free data and samples . . . and learn how Reheis quality can help your product's *repeat*-sales record.

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- **Non-destructive to fabrics**
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- **No buffering required**
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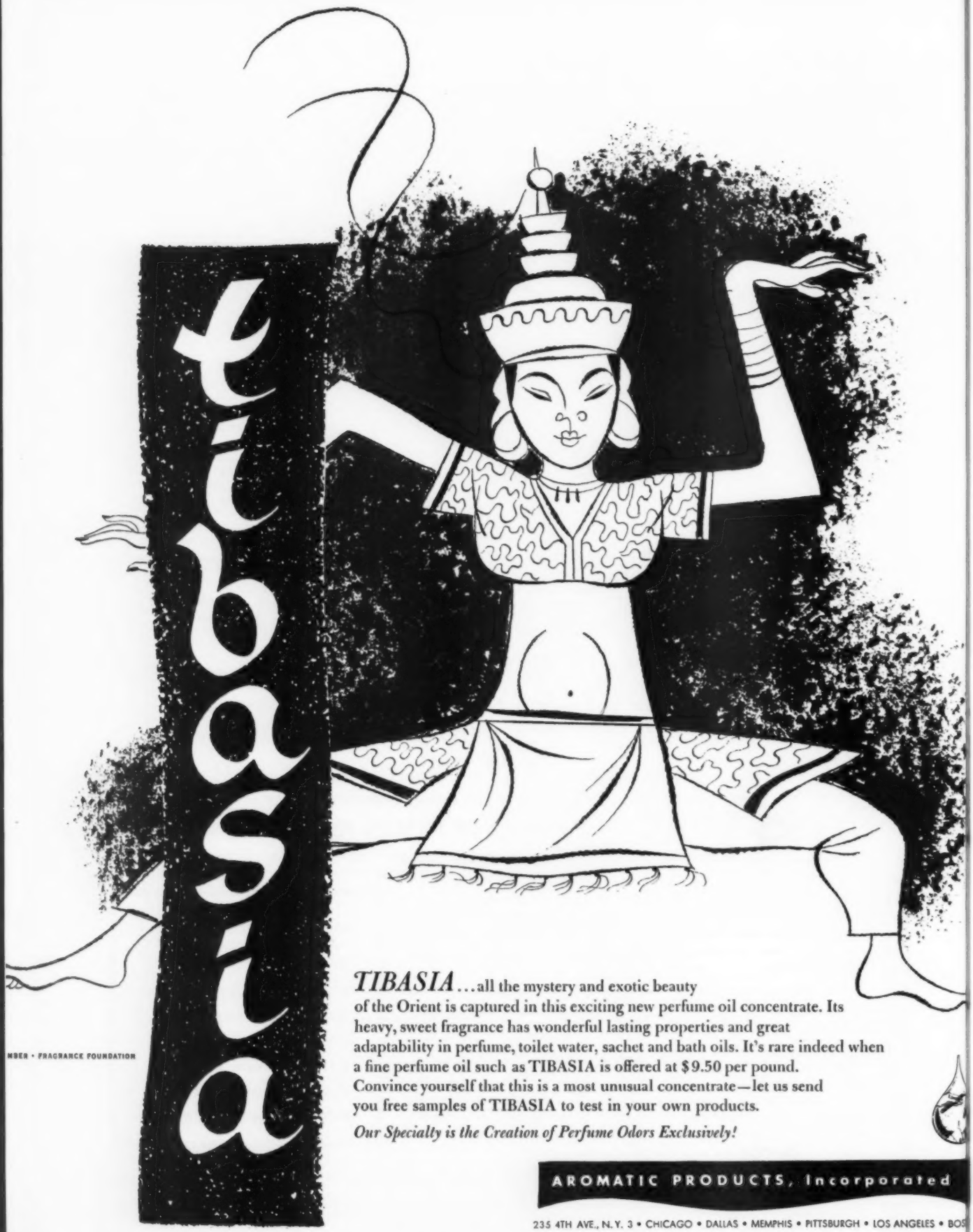

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TIBASIA...all the mystery and exotic beauty of the Orient is captured in this exciting new perfume oil concentrate. Its heavy, sweet fragrance has wonderful lasting properties and great adaptability in perfume, toilet water, sachet and bath oils. It's rare indeed when a fine perfume oil such as TIBASIA is offered at $9.50 per pound. Convince yourself that this is a most unusual concentrate—let us send you free samples of TIBASIA to test in your own products.

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DESIDERATA

Maison G. deNavarre, M.S., F.A.I.C.

Aloes Cosmetics

The aloe plant is one of a large family of related species. Recently, a type presumably grown in Florida is used in formulating a series of cosmetic preparations.

This writer remembers well working during the war with frozen fresh de-corticated Cuban aloe in the treatment of burns. A slimy "juice" can be obtained from fresh cut aloes which in turn can be compounded into a host of products. Just what properties this has over gum mucilages has yet to be proved on unbroken skin. In burn therapy the fresh plant or juice appears to be useful.

Gums in Face Masks

The Levy paper at the S. C. C. meeting on gums and especially tragacanth gum, was timely; for it brought these valuable colloids into focus again. This is especially true since the promotion of a new facial, based on gums or gum-like products.

Gum solutions or mucilages as they are called, have a rather intense bracing or tightening effect on skin during the drying process. The products can be fortified with numerous dermatological ingredients that can produce their effects as the film dries. This combined action is both desirable and beneficial.

Just study out the effect of the ingredients, pH and processing, and you too can produce an exciting new facial.

Canadian TGMA Notes

As I contemplate this writing, the S.S. Tadoussac has left the dock at Murray Bay, Quebec, the siren blowing menacingly as it passes in front of the Manoir Richelieu. Two red coated boys run to the flag pole and dip the flag three times. The 30th TGMA Convention is over.

This convention was different. First, the usual four days were contracted to three days. Second, it rained endlessly for two days, postponing the putting and golf tournaments. Finally, the speakers, having limited relationship to this industry in particular, brought messages to us all, that would make us more tolerant of our fellow man, whether friend or competitor. It was a sort of soul examination and self-assessment. Two of the speakers—Rev. Richard Jones and A. J. Conduit didn't hit me just right. Seems to me Rev. Jones, should have donned a suit of humility. The other speaker, Mr. Conduit, just couldn't boil it down to the essence sufficiently—his talk seemed too long as a dinner speaker.

Dr. George McKeown, who took "Tommy" Thomson's place at the Dept. of National Health and Welfare, Cosmetic Division, in Ottawa, was well liked by all. If one closed his eyes and just listened, one could detect a certain similarity in the manner and voice of Dr. McKeown that reminds one of Mr. Thomson. Frankly, Ottawa moves more slowly and gets less upset by sudden happenings than our people in Washington; the Canadians seem to be none the worse for it and their budget is balanced.

A few references were made to TIME and the story on the beauty business. (Personally, I wish TIME had stuck more closely to industry facts and achievements than to the tabloid type of presentation. It made me sound like a pseudo-Chilson, but perhaps I should be grateful for a mention—a plug is a plug.)

Notes

Congrats to Don Powers and Charles Fox in getting the CIBS award—it was good work. . . . Also liked Peck's straightforward comments on expensive antibiotics in treating skin ailments at the TGA Scientific Section. . . . Kligman's eulogy of Montagna at the SCC luncheon was a classic—You had to hear it to get the bang out of it. . . . Fritzsche and their library staff are to be congratulated for their "library bulletin" on essential oils, aromatic chemicals, perfume and flavor materials. . . . I like Unilever's justification for advertising as outlined in a booklet they printed and mailed from England—Some "ad" men should read it for "reasons". . . . Corn starch has now been ethoxylated by Glidden to produce two major series of water dispersible gum-like materials, varying in degree of ethoxylation. . . . In considering vitamins for cosme-

Continued on next page

tic products, β-carotene as a colorant is interesting both ways. . . . Catalin Corporation has a new antioxidant for fats, oils and waxes called 2,2'thiobis(4-methyl-6-tertiary-butyl phenol) which is readily soluble in alcohol for the making of stock solutions. . . . Canadian Department National Health and Welfare is studying inhalation of hair sprays via animal tests as is our own FDA—We anxiously await the results of these tests. . . . Recently had occasion to write a half-dozen producers of aerosol containers and suppliers for samples and information. One answered in thirty days; just got another answer as this is being written; the original request is now almost three months old. . . . Beckett and Robinson's summary of data on the inactivation of preservatives by nonionics which appeared in our worthy British contemporary S. P. C. was a good job. Am anxious to see Wedderburn's paper given some time ago before the British S. C. C.; the "P" chemists may have worked out the mathematical approach but our experience doesn't tie it together with microbiological results. . . . In Rome in 1956, mineral oil, used as a fat substitute in grilling or baking was held suspect of being cancerogenic. . . . Liquid petrolamum used as a laxative is so mentioned in a London School of Hygiene and Medicine annual report for 1955. . . . Chemical Week mentions Neish's report (Nature) of the value of mustard gas derivatives as hair growing chemicals—similar reports have appeared before the last war on identical materials. . . .

Costus Root Oil

The National Chemical Laboratory of Poons, 8, India which has a research group working on various aspects of essential oils, aromatic chemicals and other allied products, has recently completed experiments on three products. One of these is costus root oil.

The laboratory has evolved a new method for the extraction of costus root oil by which the oil has been obtained for the first time in the form in which it exists in the roots. It is free from any polymerisation or denaturing and contains a very high proportion of lactonic constituents most of which can be obtained in the crystalline form if so desired. The method is being covered by patents in India, the United Kingdom, the United States, Germany, Holland, Switzerland and France.

Recognition

The cosmetics chemist's thinking starts with the consumer. He knows that the important point about the point of sale is this — the shoppers' first introduction to your product is through sight and smell. And when they encounter a fragrance that they recognize as authentic — they're delighted, and they're *yours!*

So many leading cosmetics achieve this clean, fresh, floral brilliance with Verona products. Why not try some of the special Verona developers and extenders listed at the right — see for yourself how beautifully they bring out the latent qualities, hit and *hold* the piquant round notes you're striving for. We will gladly send samples on request.

A FEW VERONA SPECIALTIES

RESEDALIA, an acetal.
VERONOL, an aldehyde.
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PHENYL ACET ALDEHYDE PHENYL GLYCOL ACETAL
TERTIARY BUTYL DI METHYL CUMARIN
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QUESTIONS & ANSWERS

1293: BEAUTY MANUAL

Q. *We would like to receive your manual of beauty products including advice on cold waving. If you have formulas on new products we would like to know what type and price. L. E. D., Canada.*

A. Your reference to a beauty manual is rather confusing. We have no such manual. We suggest either Harry's Modern Cosmeticology or Sagarin's Cosmetics, Science and Technology as good basic texts on your subjects.

1294: DIETHYL SEBACATE

Q. *In a recent issue of your magazine under "Desiderata" we noticed information on diethyl sebacate. Would you be good enough to give us the names and addresses of manufacturers and suppliers of this material? A self-addressed, stamped envelope is enclosed for your convenience. T. L. T., New York.*

A. A comparatively odorless grade of diethyl sebacate is supplied by the British Industrial Solvents Co., Ltd., Devonshire House, Mayfair Place, Picadilly, London W 1, England. We do not know of a local supplier for this grade material. We suggest you write to the British company. Several American companies make a flavoring or perfumery grade. Write to any of the advertisers in the *American Perfumer* for samples.

1295: CRACKED SKIN

Q. *Can you give me information concerning the cause and correction of cracked skin on the hands? Do you think that urea, vitamin A or D or antiseptics have value in a heavy cream base for this condition? H. J. D., Illinois.*

A. There are many causes of cracked skin of hands and the rest of the body. To try to guess at the general cause of this would be rather difficult. There is, however, the fact that when skin chaps, such as it does during the winter, this is from dehydration. Skin can also go through some similar reaction, we are told by some people, when exposing the hands to excessive amounts of detergent solution. In chapping, the natural sebum and water are removed from the skin; skin tends to get very dry and presumably the skin could crack. Urea is a healing agent. Vitamin A and D are both present in the skin and can be absorbed from the skin. Antiseptics, of course, only have effect on microorganisms and have nothing to do with the cracking of skin. As for a heavy cream base, that is a matter of opinion. The important thing is to supply the skin with materials that will remoisturize it and give it a protective coating as well as a good feel. Anything that gives you these qualities is a desirable ingredient in a hand preparation.

1296: WHITE IODINE

Q. *With reference to a question in a recent issue of the magazine, white iodine is a complex ammonium iodide formed when ammonium hydroxide solution is added to a solution of potassium iodide, iodine, alcohol and water. The former U. S. P. formula was:*

Iodine	*50 gm.*
Pot. Iodide	*25 gm.*
Ammonium Hydroxide Sol.	*100 cc.*
Water	*400 cc.*
Alcohol q. s.	*1000 cc.*

It is doubted whether this preparation has any antiseptic value. M. F. P., Mass.

A. We agree with you that it is doubtful whether this preparation has much antiseptic value, if any. Our record shows the product as official in the N.F. VI. Thank you for sending this data to us, which we publish for anyone interested.

From time to time suggestions have been and will be made in this magazine with respect to processes, devices, materials, appliances, equipment and the like. It is not practicable for the writers and editors to have a patent search or examination made in connection with each such suggestion. Our readers are, therefore, requested and indeed urged to determine for themselves whether any patent or other right will be violated before acting on any such suggestion.

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at a stable price —

Linalool 'Roche' is more stable than natural linalool. For existing compounds, we can assist you in adjusting Linalool 'Roche' to simulate natural linalool. Also available is synthetic Linalyl Acetate 'Roche' with an equally high quality odor. 'Roche' Aromatics are available through principal essential oil distributors. AROMATICS DIVISION, HOFFMANN-LA ROCHE INC, Nutley 10, N.J.

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Now available at attractive price. Serves the same purpose in compounds as the sesquiterpene alcohols in natural oils. Has excellent blending and cohesive properties. Delicate lily-like odor. Can be used as a substitute for farnesol.

GERANYL ACETONE 'Roche'

Completely new, inexpensive material. Has basic rose type of odor, resembling rhodinol formate or geranyl formate, but with good green note. Aldehyde-like top note. Stable in soap.

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AERO SCRIPTS

Jack Pickthall*

I have just finished reviewing Paul Becher's excellent book on Emulsions. It was rather disappointing not to find mention of aerosol emulsions. The word "Aerosol" does in fact occur in the index, but it refers to the group of surface active agents. There are plenty of references in the literature to emulsified systems in pressure packs and a few comments would have been welcome from Mr. Becher.

I was surprised and delighted to receive a telephone call from Mr. R. H. Shepherd of Aerosol Techniques. I tried to persuade him to attend the discussion group's talk entitled "Aerosol Propellants" held on March 26 but he was all set to leave for the Continent. I hope to see him on his next visit. We have not forgotten the enthusiasm he gave us for aerosols when he spoke to the Society of Cosmetic Chemists of Great Britain in 1954.

Future of Aerosols

Reading the growing literature on Pharmaceuticals insomuch as they concern the aerosol industry, and talking to interested parties, there seems no doubt that the future of aerosols lies mainly in this important field. In the cosmetic field one is often fighting to justify the change from conventional packs to pressure packs and sometimes the justification is not readily forthcoming. In the medicinal field it is only too easy to name the advantages of this new technique of application. The need for co-operation between aerosol experts and cosmetic chemists is real enough, but an even greater co-operation is called for when doctors and aerosol people get together. There could be some appalling mistakes made if this co-operation is not forthcoming.

As has been reported in print and mentioned to me personally, we can expect to see Frederick G. Lodes in Europe in the not too distant future (he probably will have been by the time this is printed). The purpose of his visit is "to take stock of recent trade association developments." Behind this interest of the C.S.M.A. (on whose behalf Mr. Lodes holds a watching brief), is a desire to co-operate with aerosol associations in Europe. We await developments with interest.

Effect of European Market

The possible effect of the European Common Market on the aerosol industry has been very well covered by Dr. Tom C. Clark (Aerosol Age, January, 1958). He comments that serious consideration is being given to the question by U.S. companies who are buying factories in the original six countries (France, Germany, Italy, Belgium, Holland and Luxembourg). The possible effects on propellant, valve and container position is well discussed. Clark thinks the effect on propellants will be increased output from present suppliers *and* the advent of new suppliers. The Common Market may well result in a change in the position now so favourable to U.S. suppliers. Clark says that U.K. prices for tinplate are lower than those existing in the U.S. or in any European country. The deciding factor may be whether Europe can cater for the demand where metal containers are concerned. As far as equipment is concerned, the U.K., Switzerland and Germany should be able to take care of all European requirements and in due course we can expect more loaders to become established. Clark concludes with these words, "On the whole, the Common Market (with which, practically speaking, the European aerosol industry will truly "come of Age") should present a most salubrious climate for the industry's future development. Prices should go down and volume increase. More people should make more money and consumers demand and receive better products. If only politics can be held to the minimum, the next 10 to 15 years look indeed bright."

New Propellant

From du Pont comes news of a new propellant—"Freon C.318" or octafluorocyclobutane. Its stability is such that even treatment with acid and alkaline systems leads to no hydrolysis. It has low water solubility, and low oil solubility. Although suggested for use with

* Chief Chemist, Polak & Schwarz, England, Ltd.


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Erwin O. Genzsch (Aerosol Age, February, 1958) has written on the lack of published aerosol technical data and how this deficiency is hampering the development of the industry in Europe. I have a great deal of sympathy with Genzsch's point of view inasmuch as scientific evidence in certain sections is lacking—less sympathy in regard to the fact that it should hamper developments. The main point in the article appears to be that commercial people will accept sales success for a given product as evidence of the efficiency of that product, but the scientist wants scientific proof that this new method of application has definite advantages over the conventional mode of operation. This is only too reasonable, but is it reasonable to let this stand as an obstacle to development? The huge industry which has sprung up in America has certainly not developed without a great deal of scientific background. Mistakes have been made, possibly because of insufficient attention to scientifically controlled experiments, but most of these mistakes have been corrected by the chemist and technician. Scientific publications, mainly by suppliers to the industry, have been of a high level. Research on the efficiency of a given product should be with the experts in that particular field. For instance, firms who already sell insecticides in normal containers, must have at their fingertips all the scientific data they require. Together with the experts in the general aerosol field, they should have little difficulty in establishing techniques for the testing of the new product. This argument applies to any particular product, sun-screens, deodorants or hair lacquers. It may be very acceptable to find all the answers in the literature, but if it is not there, you have got to go out and get it yourself.

America has given us a flying start and I am convinced that European scientists can continue the good work and develop products which are of outstanding efficiency. Whether or not they will publish their findings will remain to be seen. Very often the decision as to whether information of a technical nature should be made available to all and sundry does not rest in the hands of the scientist. To sum up, let us agree there is insufficient data in the literature, but let the Europeans help to increase the available information by their own contributions and not simply sit back and await developments. Everyone has to put something in the kitty for the common good. First priority in this endeavour must go to the medicinal and pharmaceutical fields. Here, we are on safer grounds because any medical authority which decides to co-operate with the aerosol industry will most certainly insist on full publication.

European Progress in Aerosols

What of the European progress in aerosols? Actually, it is surprisingly difficult to build up a realistic picture. I have been given a figure of over 12,000,000 units in the U.K. for 1957. I must say that in England there is at long last a real interest from both public and commercial enterprises. At the moment we are pretty well catered for in most fields, propellants, containers and loaders. Dr. Clark has given his report of the European market (Aerosol Age, February, 1958) and has made pointed comment on our resistance to new names and ideas. I suppose this is partly true, but in the U.K. at any rate the success of many products advertised on television proves that people *will* try a new product if the idea is properly presented to them. Logically, every item we buy was new once. As to the man in the street, well, he has heard of aerosols by now and most of them have tried them in some form or other. The women have certainly accepted hair lacquers, room deodorants and insecticides and the men are steadily accepting shave creams and there are some excellent U.K. products on the market as far as the last item is concerned. Even the daily papers speak of aerosols as items of news, even if not in the manner we desire. One important daily paper has just devoted major headlines to "There may be danger in empty cans." The article suggests that the Institute of Public Cleansing may soon issue to housewives a warning that "you may have a potential 'bomb' in your home, bathrom, bedroom or kitchen."

Risk of Explosions from Spray Cans

I quote, "The Institute has been investigating the risk of explosion from spray cans which have held pressure-packed liquid. The risk comes when the cans are empty and the institute thinks housewives should be warned about disposing of them. The cans hold, among other products, hair lacquer, oven-cleaning materials, soaps, paints, and germicides, which are forced under pressure into tinplate cans. The contents are released as a spray at the touch of a button. On all such cans there is an instruction to the user—'Do not attempt to dispose by burning.' For when such cans are empty a residual gas pressure remains. This could increase on heating and explode. An empty can exploded in a coal scuttle when a housewife shoveled hot soot on top of it. The whole room had to be redecorated. Hot ash on empty cans is believed to have caused an explosion in a Westminster refuse truck. Mr. Wyndham Brown, the institute's secretary, said "It does not mean that these containers are dangerous and something terrible that we should not allow into our homes. They are just something that must be treated with caution. The risk is not serious if the housewife does not do anything silly and provided she reads the printed instructions. If she stores such a container in an airing cupboard, then there is a considerable risk of explosion. The attention of our 600 members, they are all local authority officers, will be drawn to the risk. We will suggest in our journal that householders should be told about the risk and warned to take note of the printed caution." Mr. Brown said manufacturers tested the cans for leaks in a 130 degree temperature. This provided a safety check against the risk of an explosion while the container was standing in the house. "But," he added, "if hot ashes are placed on top of an empty can an explosion must follow. Treated with care these cans are perfectly all right."

And do not forget, questions have been asked in the "House" (Houses of Parliament) on the Aerosol Export Trade. One way and another, Aerosols are becoming well known in the U.K.

Book Review

VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. 1800 pages, size 8½ x 11 inches, illustrated. Price $30.

This third edition of a single volume encyclopedia first published in 1938 lists thirty-three contributing editors who presumably are responsible for the 100,000 "succinct definitions," the 1400 illustrations, 14,000 articles and 15,000 fundamental explanations. Everything from astrology to zoology is covered.

The generous use of tables presents a great deal of information on a given subject in a small space in condensed form.

While treatment of the different subjects varies greatly, it appears to be adequate for the purpose. This reviewer had occasion to check two items: "aleurone grains" and "alewife" and found both adequately described. On the other hand, hydrolysis is covered by three words.

It would not be difficult to find omissions in a single volume encyclopedia, but the coverage is amazingly good. Some of the definitions are readily understood by a layman while others, such as that of an "emulsion" seem unnecessarily technical, when one realizes that this book is intended for laymen as well as those technically trained.

While some have compared the present encyclopedia with the single volume of Clark and Hawley ("Encyclopedia of Chemistry), this reviewer feels the comparison an improper one. In as broad a subject area as "Van Nostrand's Scientific Encyclopedia," one cannot expect the precision in any given category as in a book exclusively devoted to one major subject. And there is a need for a book of general scientific definitions and discussions in every field of science. Specialists will turn to books majoring in their areas.

It is true that some fields have greater treatment than others. Perhaps subsequent editions will equalize this as well as expand the number of entries.—*M. G. deNavarre*

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Germicides Versus Antibiotics and Chemotherapeutics in the Control of Resistant Staphylococcal Infections of the Skin**

SAMUEL M. PECK, M.D.* and IRWIN KANTOR, M.D.

In treating minor pyogenic infections of the skin, the physician is usually called upon to treat infections due to the staphylococcus or streptococcus. In ordinary skin blemishes, such as the pustules of acne, the predominant organism cultured is the staphylococcus. While the physician has a wide range of antibiotics for local therapy, he has relatively few effective antiseptics which he can readily incorporate into a prescription for such purposes.

In routine dermatologic practice the usual pyogenic manifestation is that seen as part of the problem of acne. The number of times where a dermatologist would rely on a purely external antibacterial measure as against the internal administration of either sulfa drugs or antibiotics usually is limited again mainly to acne and to a much lesser degree to impetigo and other minor secondary infections. It is by far the staphylococcus which is usually incriminated.

In a number of publications the senior author has repeatedly maintained that in the treatment of acne one of the most important factors was the control of the infection associated with the condition caused again mainly by the staphylococcus. For this reason many dermatologists agree that the internal administration of antibiotics has been a great step forward in the treatment of acne. Numerous experiments by many physicians have shown that the local use of antibacterial measures is as important, if not more important than the internal medication in the long run, for the treatment of the pustular element of acne except in severe and persistent cases such as acne conglobata.

This reliance on the internal administration of antibiotics grew with time because of the excellent response obtained. Penicillin was used less and less because of the fear of allergic complications although initially the response to this antibiotic was excellent. In recent years—especially the last 18 months—we have become increasingly aware that not only did many pustular skin lesions fail to respond to internal and external administration of antibiotic preparations, but that a number of our patients have apparently ceased to respond to a specific antibiotic after initial improvement and have even developed new pustules. For this reason we have been led to try one mycin after another in resistant cases resulting not only in a loss of treatment time, but in an increased cost for expensive medications to the patient.

It then became routine in our practice to culture pustular acne lesions in order to obtain a spectrum of antibiotic activity for the organisms. In 90% of the cases a staphylococcus could be cultured. The rather surprising findings which we are about to report were based on our clinical and laboratory experience with, not only our cultural results, but on the clinical response of the patient compared with the results of our laboratory findings.

Materials and Methods

After preliminary cleansing of the skin with alcohol, intact pustules were punctured with a sterile needle and the resulting pus or serum transferred to test tubes containing nutrient broth. The tubes were incubated at 37°C for 24 hours and streak plates then made. These were incubated for 48 hours at 37°C, and inspected for growth. The organisms isolated were exposed routinely to various antibiotics and chemotherapeutics by the disc method. In addition, pieces of gauze were saturated with the antiseptic preparations and similarly tested. This simulates the method of usage by the patient. If there was a clear area of any size around the disc or gauze, the organisms were considered sensitive to the antibiotic or antiseptic. The degree of sensitivity is expressed in mm. of inhibition.

We are reporting our last 22 cases. These were taken at random without an attempt to pick any particular type of clinical material.

Results

Tables I to IV summarize the results. It can be seen that in every instance but two a Staphylococcus aureus or albus was isolated. If we arrange our material chronologically, it seems that over a period of about a year, not only have the organisms isolated become increasingly resistant to penicillin, but many of them were or have become resistant to other antibiotics in various degrees as well. Surprisingly enough it was not always a matter of previous exposure to any one antibiotic. Although from our material, we would suspect that in many instances resistance to a particular antibiotic was acquired after initial sensitivity to it. We plan to do future work to clarify this point. It is not, however, too important for the purpose of these studies.

In Table IV we have listed some of the organisms isolated with their susceptibility to various antiseptics. It was not the purpose of this study to test all the well

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**Reprinted from the Proceedings of the Scientific Section of the Toilet Goods Assn. No. 29, June 1958.

Figure 1—Bacterial Sensitivity by the disc method in patient with Pustular Acne. S. albus isolated
Key: P—Penicillin, S—Streptomycin, TC—Tetracycline, T—Oxytetracycline, A—Chlortetracycline, E—Erythromycin, C—Chloramphenicol, SSS—Triple Sulfa, B—Bacitracin; grey center disc—neomycin, white center disc—polymixin B.

known antiseptic materials but to test preparations which were, either readily available to the physician in the form of prescriptions, or were available to the public as over-the-counter preparations claiming to have antiseptic properties. Some of these preparations have been devised as general antiseptic ointments for minor infections while others are being recommended by dermatologists, as well as by manufacturers of over-the-counter products, particularly for acne. They are supposed to contain antiseptics which will have some effect on the organisms associated with this skin condition.

Much to our surprise some of the routine antiseptic remedies had little, if any, effect on the so-called resistant staphylococci. Unfortunately the physician is unable to readily prescribe effective antiseptics such as hexachlorophene in a prescription since it is unavailable in most pharmacies for compounding. We say this quite deliberately, since much to our surprise a well-known antiseptic, such as iodochlorohydroxyquinoline, widely used by dermatologists, seems to have relatively little effect on the resistant staphylococcus; at least as found in a preparation which we bought directly from the druggist.

The ages of our patients varied from 12 to 59 years and were divided between 13 males and 9 females. Geographically their homes were in the Greater New York area except for one 16 year old male who attends school in Massachusetts, and one 18 year old female who lives in Havana, Cuba.

Discussion

Prigal (1) in his paper, *Infectious Asthma and Intrafamilial Contagion*, notes that "With our present knowledge of the staphylococcus, its remarkable adaptability to all kinds of changes of environment, including exposure to antibiotics to which resistance is developed, its relative failure to produce antibodies, and its destructive action on white cells, we can understand the reasons for the persistence of infection due to this ubiquitous, hardy, and highly versatile organism." He also notes the clinical development of resistance to four antibiotics employed in sequence to eradicate infection due to persistent infection with hemolytic staphylococci.

TABLE I

Staph. Aureus

Drug	*	*	Zones of Inhibition (mm.)					
Bacitracin			13				10	
Carbomycin		8						
Chloramphenicol	15	10	15	15	7	12	10	8
Chlortetracycline	0	5	15	0	4	0	16	10
Erythromycin	16	11	16	16	15	10	10	12
Neomycin	8	0	5	5	6	0	0	0
Novobiocin	12	11	0	14	12	10	12	8
Oleandomycin	10			6	8			5
Oleandomycin & Tetracycline	14					14		
Oxytetracycline	0	0	15	0	5	0	14	13
Penicillin	0	0	14	0	0	0	16	0
Polymixin B	0	0	12	0	0	0	5	0
Streptomycin	14	9	15	14	6	12	9	8
Sulfisoxazole	0	0		0	0	0	0	0
Tetracycline	5	0	14	0	5	0	14	15
Triple Sulfa	0	0	0	0	0	0	0	0

*2 different cultures taken from the same patient, 6 months apart.
One organism sensitivity reported as resistant to penicillin, chlortetracycline, oxytetracycline. Moderately sensitive to tetracycline, oleandomycin and tetracycline and streptomycin. Sensitive to erythromycin, carbomycin, chloramphenicol, bacitracin and neomycin. Zone of inhibition not listed in mm.

It is well known that bacterial resistance to penicillin can occur naturally but can also be acquired. It has also been pointed out by a number of workers that penicillinase is important but it is not the sole factor in the natural resistance found in the bateria. Acquired resistance is the term used for bacterial fastness which develops from contact with antibiotic.

Goodman and Gilman (2), state that microorganisms made resistant to penicillin *in vitro* are ordinarily less virulent than the parent strain. However, bacteria which become penicillin-fast *in vivo* manifest no loss in virulence. As a rule microorganisbs, with penicillin fastness acquired *in vitro* or *in vivo*, do not exhibit altered sensitivity to other chemotherapeutic agents.

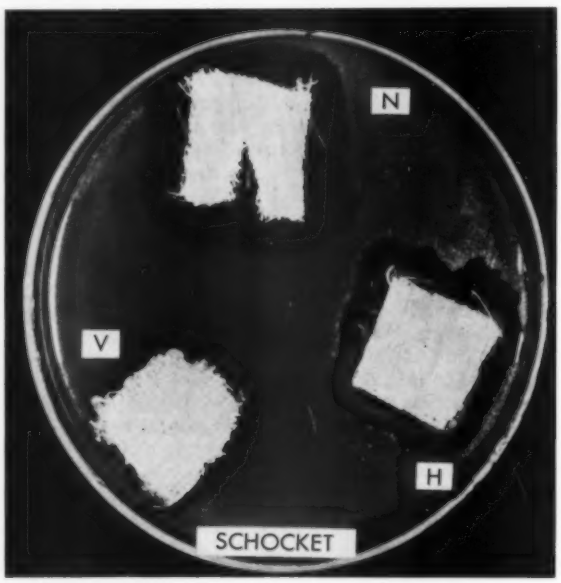

Figure 2—Same patient as figure 1.
N—Benzalkonium Chloride, 1:1000;
H—Hexachlorophene Lotion 0.5%
V—Iodochlorohydroxyquinoline Lotion 3%.

TABLE II

Staph. Albus

Drug	Zones of Inhibition (mm.)											*	
Bacitracin	5	6	7	7	10	9	10		0	0	0	0	11
Carbomycin									0	18	0	14	0
Chloramphenicol	18	17	15	16	16	15	10	12	0	12	0	10	0
Chlortetracycline	15	6	4	5	17	14	15	15	13	20	0	9	25
Erthromycin	15	16	16	16	12	13	7	10	0	16	13	12	0
Neomycin	4	0	4	0	0	0	0	10	5	15	14	14	15
Novobiocin	0				0	0	0	14	0	12	0	14	10
Oleandomycin & Tetracycline								10	0	15	15	10	0
Oxytetracycline	13	0	0	0	16	10	10	14	14	20	25	18 partial	16
Penicillin	5	0	0	0	16	5	5	0	0	12	20	8	0
Polymixin B	12	4	4	5	10	5	7	14	11	0	0	0	0
Streptomycin	15	14	4	15	12	12	10	13	0	17	0	18 partial	0
Sulfisoxazole	0	0	0	0	0			0	0	22	0	0	0
Tetracycline	16	5	0	0	16	10		13	17	16	21	20 partial	20
Triple Sulfa	0	0	0	0	0	0		0	0	16	0	20 partial	0

*Reculture of patient who showed previous s. aureus.

The introduction of penicillin changed our whole approach to the treatment of infections and for many years penicillin was used as the chief agent against staphylococcal infections. This viewpoint has undergone a marked change, not so much because of the question of resistant strains of bacteria to penicillin, but because of the increasing number of mild to severe allergic reactions following its use.

At present the number of infections due to staphylicocci resistant to penicillin is rapidly increasing. According to Welch (3), these organisms are usually penicillinase producers. He differs, however, with Goodman and Gilman in that he believes the same tendency is being observed towards chlortetracycline, oxytetracycline and to a lesser degree towards other antibiotics. Like other authors, Welch believes this to be especially true of staphylococcic infections encountered among hospital patients; in the 1954 edition of his book he states that the majority of staphyloccoccic infections in the general population are penicillin sensitive.

Waisbren and Streilitzer (4), also came to the conclusion that, as a species, staphylococci have been little influenced by antibiotics and that the majority of staphylococci are sensitive to one or the other of several of the combinations of antibiotics studied, including penicillin, chloramphenicol and tetracycline; but apparently in many instances greater resistance to some of the antibiotics has developed from year to year. These include erythromycin, neomycin, etc. These authors admit, however, that while the vast majority of strains of staphylococci are sensitive to one or the other of several antibiotics, in the general hospital the problem of resistance should always be considered. Welch has also noted that cross resistance between penicillin and the "broad spectrum" antibiotics occurs.

After noting the remarks of the above authorities, it is interesting to note some recent literature concerning this problem. An editorial in the *J.A.M.A.* (5) points out that the staphylococci infections constitute a worldwide health problem. The long awaited emergence of antibiotic-resistant strains is providing a serious problem in many hospitals. For many years physicians had been combating staphylococcic infections with germicidal preparations and although from the time the antibiotics first became available there have been warnings that they were bacteriostatic rather than bacteriocidal, the therapeutic importance of this fact was not always appreciated. In the case of the antibiotic-resistant staphylococci, the development came faster than was expected. Fortunately, a few antibiotics are still effective against staphylococci. How long they will remain so will depend on the wisdom and restraint with which they are used.

Christie (6), reports on a study of 7 members of an expedition who were isolated on the Greenland Ice Cap for a 100 days. Bacillus subtilis and staphylococci were found to be ubiquitous organisms, particularly on the skin and that there was a tendency for a common population of skin bacteria to develop in the members of the group. Also that skin carriage is associated with nasopharyngeal carriage especially in relation to Staph. aureus. Interestingly certain organisms nonsensitive to penicillin may, by natural processes, be replaced by organisms sensitive to penicillin. This occurred in 1 person with respect to Staph. albus.

Koch and Donelli (7), report on a sixfold increased incidence in staphylococcic infections in children between 1952 and 1956. The ages varied from 2 to 15 years. 51% could be traced to hospital contacts on the wards or repeated visits to the outpatient department. In 92% of hospital acquired infection, the organism was resistant to penicillin and in 74% to tetracycline. Chloram-

TABLE III

Non-Staph. Organisms Isolated

Drug	Zones of Inhibition (mm.) Diphtheroids	Strep. Viridans
Bacitracin	9	10
Carbomycin		
Chloramphenicol	10	13
Chlortetracycline	16	12
Erythromycin	10	8
Neomycin		0
Novobiocin		0
Oleandomycin & Tetracycline	0	
Oxytetracycline	15	9
Penicillin	16	12
Polymixin B	6	5
Streptomycin	5	10
Sulfisoxazole		
Tetracycline	15	0
Triple Sulfa	0	0

TABLE IV

Antiseptics

Drug	Organisms with Zones of Inhibition (mm.)										
	S. albus	S. albus	S. albus	S. aureus	S. albus	S. albus	Dipth.	S. albus	Strep. virid.	S. albus	S. aureus
Benzalkonium Chloride 1:1000	10	16	17	15	16	14	14	8	5	10	10
Iodochloro-Hydroxyquinoline 3%	4	0	0	0	0	12	0	8	0	0	0
Hexachlorophene Lotion A	12	13	12	12	15	14	15	14	13	10	8
Acne Lotion A	5							6			0
Hexachlorophene Lotion B	15							20			16
Acne Lotion B	7							5			8
Cream A	0	0	0		0	0					
Cream B	0	0	0		0	1x2					
Cream C	0	0	0		0	2					
PVP Iodine Preparation	10x20 mm	0	15x30 mm		18x20 mm	10x22 mm					

1. Acne Lotion A contains sulfur, resorcinol in 40% alcohol.
2. Acne Lotion B contains hydrocortisone alcohol, 0.25%, N-sulfanilylacetamide 8.5%, resorcin 2% and sulfur colloid 5%.
3. Cream A contains phenyl mercuric acetate 0.01%.
4. Cream B contains bithionol (percentage not listed).
5. Cream C contains bithionol 0.3%.
6. Hexachlorophene Lotion A contains 0.5% hexachlorophene.
7. Hexachlorophene Lotion B contains 0.2% hexachlorophene and 0.625% salicylic acid.

phenicol, bacitracin, novobiocin and erythromycin gave best results. They further state that the resistance to antibiotics of staphylococci in any community is determined by the local use of antibiotics. The reason for the low resistance rate of staphylococci to chloramphenicol, erythromycin, novobiocin and bacitracin can be ascribed to the rarity of their usage. It is imperative, they urge, that physicians restrict the use of antibiotics to patients with specific bacterial infection.

Godfrey and Smith (8), in an article on the hospital hazards of staphylococci infections point out that the bacteria were obtained in the majority of cases from the skin lesions. Also, they doubt if the commonly used mixture of penicillin and streptomycin is worthwhile in view of the larger number of staphylococci strains in hospital which are resistant to these drugs. These authors assert that antibiotics are too valuable to have them wasted by abuse and that it is possible that chlorine washes or acriflavine or some other antiseptic solution might be a better answer, when there is no generalized body reaction.

Nolen and Fleisher (9), studied the effect of the widespread use of antibiotics on the nasopharyngeal bacterial flora of the general population. They found that in a community where 92% of the 5 year inhabitants had received antibiotics the prevalence of asymptomatic carriers of drug-resistant pathogenic staphylococci was 18.5% when carriers who had received antibiotics in the 6 months period before the study were eliminated. They emphasize that 12.6% of the school children in this community, even though neither they nor their immediate families received antibiotics in the 6 month period before this study, were carriers of drug-resistant pathogenic staphylococci. The practical significance of this finding is attested to by the many reports in the literature dealing with the increasing number of infections caused by such occasions.

The importance of staphylococcic disease is exemplified by a recent symposium on "Staphylococcal Infection in the Hospital and Community" reported in the *American Journal of Public Health*. Ravenholt and Ravenholt (10), conclude that a correlation does exist between staphylococcal contamination of the hospital environment and staphylococcal disease of patients and staff. No longer can staphylococci be regarded as necessarily ubiquitous in hospitals, nor discounted as "contaminants" when found in specimens from sick or dead patients.

From some of the reports previously cited as well as from our clinical impressions we feel that the problem of staphylococcal infections exists as well in the community at large. In fact, Wentworth, Miller and Wentworth (11), in the same symposium, point to the hospital nursery as a source of family infections during epidemics of staphylococcal disease. They correlate staphylococcal infections among family members with an epidemic of pustular dermatitis in a Cincinnati hospital and suggest that the persistence of the epidemic strains within the family for long periods could eventuate in transmissions to friends and relatives and through infected siblings be communicated to school populations. At the same time these authors recognize that the physicians in a community seem to be confronted with an increase of suppurative disease independent of any hospital association and that there may be other sources of epidemic strains within the larger community.

Fekety et al. (12), report an epidemic of nursery-derived suppurative illnesses of infants and mothers due to Staph. aureus. Infant pyoderma was the most common disease noted; breast abscesses were the most common maternal infections. The organism was resistant to penicillin, streptomycin and the tetracyclines; and was sensitive to chloramphenicol, erythromycin and novobiocin. They present evidence suggesting that this strain of organism is now commonly found in the general community.

Jellard observed a lower colonization rate in the nursery when an antiseptic solution was used in the case of the umbilical stump which she considered the source of the spread of staphylococci. Bathing infants daily with hexachlorophene soap has apparently reduced the spread of staphylococci, presumably by preventing colonization of the skin and by reducing the frequency of transmission via hands and the air (14) (15).

When we consider the above discussion of the recent literature, we are struck by the fact that, what once was considered a problem of antibiotic resistant staphylococci in hospital, has now become the problem of the practicing physician in the general community. Our observations on random cases in the Greater New York area, at least with respect to acne and pyodermas, seem to confirm this. We do not believe this to be true only in dermatologic practice as our pediatric colleagues inform us that there is an increased incidence as well of staphylococcal pneumonias with the same resistance to chemotherapy or antibiotics.

It is obvious from the data presented that at least 50% of the organisms isolated from the skin surface were not only resistant to penicillin but in some degree to other antibiotics as well. There was no single instance

where resistance did not exist to some cherotherapeutic agent or antibiotic. At the same time no single instance was found where these resistant strains were not sensitive to an antiseptic such as hexachlorophene. Perhaps the writer of the editorial in the *J.A.M.A.* showed great perspicacity in reminding us that physicians treated staphylococcic infections for years with germicidal solutions and that the few remaining potent antibiotics should be used with wisdom and restraint.

Conclusions

We are fully aware of the pitfalls encountered in a study such as this. Phage typing, coagulase studies, pathogenicity, penicillinase activity, etc. are all factors to be reckoned with in a complete investigation. However, we attempted to correlate the laboratory findings with the clinical results and were in the fortuitous position of not only being able to see the effect of a drug on our patient but the actual emergence of recurrences and new superficial pustules after initial improvement, signifying that the drug had lost its effectiveness.

There is yet another factor to be considered in this question of antibiotics and chemotherapeutics versus antiseptics, namely sensitivity. Both topical and oral usages of antibiotics are capable of inducing an allergic state which precludes the use of these agents in more serious systemic infections.

While it is true that antiseptics are capable of creating an allergic state on the skin, nevertheless this does not prevent the prescribing of effective antibiotics for severe infection.

We therefore conclude that, inasmuch as the antibiotics and chemotherapeutics can induce resistance not only to one but perhaps to other agents of a similar class, and since the commonly used antiseptics are at least as efficacious and do not breed resistance, for preparations to be used on the skin the antiseptics are to be preferred.

Summary

1—22 cases with pustular acne or pyodermas were studied from the viewpoint of sensitivity to commonly used antibiotics and chemotherapeutic agents of organisms isolated from the lesions. (2 patients had repeat cultures, resulting in a total of 24 cultures.)

2—In all but 2 of the cases, a staphylococcus was isolated from the skin lesion. While this is no absolute proof of pathogenicity, it is of clinical interest in view of the reports on increase of staphylococcal infections both in the hospital and in the general community.

3—Employing the disc method, about ½ of the organisms isolated were found to be penicillin and neomycin resistant. Since the latter antibiotic is commonly found in topical ointments, this finding is of practical importance. In many instances the same organism showed resistance to from 1 to 7 of the antibiotics tested.

4—In practically all of the cases, sulfonamides had no effect in inhibiting bacterial growth.

5—In a small series of cases antiseptics such as hexachlorophene and benzalkonium proved as effective as the antibiotics and significantly there was no resistance encountered. However, some of the proprietary acne remedies and antiseptic creams sold over the counter showed such small zones of inhibition that for practical purposes they were worthless as antibacterial agents.

6—In the limited study carried out, it appears that for the local treatment of minor infections, it is better to use the commonly available, effective antiseptics rather than the antibiotics, whether singly or in combination. It is important to use an effective concentration of an antiseptic such as hexachlorophene.

7—If antiseptics instead of antibiotics are used for the relatively minor skin infections, then our few remaining antibiotics, effective against staphylococcus, can be employed to greater advantage in the more serious systemic diseases.

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Minimum Purity of Soap Perfumery Ingredients

Soapers who are heavy buyers of perfumery synthetics are acutely conscious of the importance of purity or so called "minimum purity". Most synthetics are purchased on the basis of tests carried out at the time of shipment, and whilst this is a very dependable method, there are a number of these fine chemicals used in soap perfumery that are liable to suffer noticeable deterioration either during storage or transit, or both, particularly where containers are opened for sampling the contents.

Many examples can be quoted of perfumery ingredients known to keep badly once the container is opened, e.g., vetivenyl acetate and veratryl aldehyde, to mention only two. Apart from the risk of damaging the chemicals by breaking the seals of their containers, it is also advisable to point out that exposure to light is often detrimental to quality, e.g., thymol is sensitive to light, and that any appreciable increase in temperature (say 10 deg. C.) might well lead to deterioration of quality. Santalol, the odorous ingredient of oil of sandalwood, shares with several other synthetics, a marked sensitivity to heat. Lower technical grades of synthetics are more sensitive to agencies such as light and heat than the purer grades.

It will be appreciated, therefore, that if an analysis is made when the shipment of synthetics arrives at the plant, this may well differ very considerably from the specifications based on minimum purity as determined by analysis at point of embarkation. Discrepancies due to marked differences in minimum purity have, in the past, been responsible for quite a lot of acrimonious correspondence between supplier and customer. Discoloration is usually the first indication of loss of quality, some synthetics being definitely suspect and others known to be quite stable.

Although glass, tin, aluminum, fibreboard and wooden barrels are used for packing the synthetics, care has to be taken to see that the material used for the container has no injurious effect on the chemical. Although in most cases, tin cans and aluminum are quite safe, there are some substances that cannot tolerate these metals. Rhodinol should not, for instance, be packed in aluminum containers, but it may be packed in tin whereas rhodinyl acetate, butyrate and formate should not be packed in tin, but in aluminum. Glass, either bottles or demi-johns are the safest containers for all perfumery ingredients but it is not, of course, economical to prescribe these for bulk quantities.—**Paul I. Smith.**

A Study of the Penetration of Aluminum Salts into Excised Human Skin**

IRVIN H. BLANK, Ph.D.,* JOHN L. JONES, JR., B.S.† and EDITH GOULD, B.S.*

Several hypotheses have been proposed to explain the action of antiperspirants. None is yet sufficiently well supported by experimental evidence to indicate exactly how a topically applied antiperspirant can reduce the amount of sweat delivered to the cutaneous surface. Some of the mechanisms of action which have been proposed include: 1. alteration of the tissues which line the orifice of the sweat duct; 2. alteration of the electrostatic charge on the surface of the outer portion of the sweat duct; and 3. direct action on the secretory portion of the sweat gland or on the nerves which control its secretory action.

It seems safe to state that in order to act directly on the sweat gland or its nerves, a topically applied substance must reach the gland in sufficient concentration to produce a physiological effect. It is true that a topically applied substance might evoke some type of inflammatory reaction in the skin which would secondarily inhibit sweat production, even though the applied substance itself had not reached the gland. To us, this seems unlikely.

If a substance does reach the gland after topical application, it may have passed through the sweat duct into the lumen of the gland, or it may have passed directly into the skin, with subsequent diffusion into that portion of the dermis which surrounds the gland. Pathways of penetration into the skin have always been difficult to determine. In recent years, however, autoradiography has greatly facilitated identification of these pathways. To our knowledge, autoradiography has not been used to determine whether the aluminum salts penetrate the skin or not, and, if they do, by what avenue.

A study of penetration with radioactive aluminum presents difficulties. Therefore, it was decided first to study the penetration of non-radioactive aluminum salts into excised human skin, even though it was recognized that such studies would give less exact and less detailed data. Both types of investigations have their limitations. One can always question whether permeability data obtained with the excised skin apply to intact skin on living man. So far as the sweat duct is concerned, however, one might expect that penetration would take place more easily into the non-functioning gland of excised skin, since active sweating of living skin would tend to remove any material which had entered the duct. Most of the penetration experiments in this report have been performed on abdominal skin excised at autopsy. Axillary skin is more difficult to obtain. The minimum amount of an aluminum salt which can produce a physiological effect on the sweat glands may be very small and this small amount of non-radioactive aluminum may not be detectable by our present methods. Detection of aluminum in the dermis does not signify that the aluminum is necessarily in or around the sweat glands. In spite of these several limitations, we believe that it is probably correct to conclude from the data to be presented in this paper that, following topical application, little if any aluminum will reach the sweat gland or the dermal area surrounding it. The more detailed and costly experiments with radioactive aluminum seem not to be justified at this time.

Methods

The method used here for studying the penetration of aluminum salts into the skin is similar to that previously reported by Blank, Griesemer, and Gould (1). This method is, in turn, an adaptation of a method originally suggested by Flesch, Satanove, and Brown (2). A known volume of an aqueous solution of the aluminum salt is held in contact with a circumscribed area of excised skin for a definite period of time. After the exposure, the solution is discarded, the cutaneous surface is washed, a disc cut from the exposed area, and the epidermis removed from the disc. The amount of aluminum present in the dermis is then determined quantitatively. The sweat glands, of course, are located well down in the dermis.

Penetration Through Excised Skin

The chamber used in these experiments is shown in Figure 1. In the chamber, the skin, freed of its adipose tissue, is held between the two rings, C and D, with the epidermis facing ring C. The area of the hole in these rings is exactly 3 cm^2. The four small pegs in the upper ring, C, which protrude through holes cut i the skin, and corresponding holes in the lower ring, D, prevent the

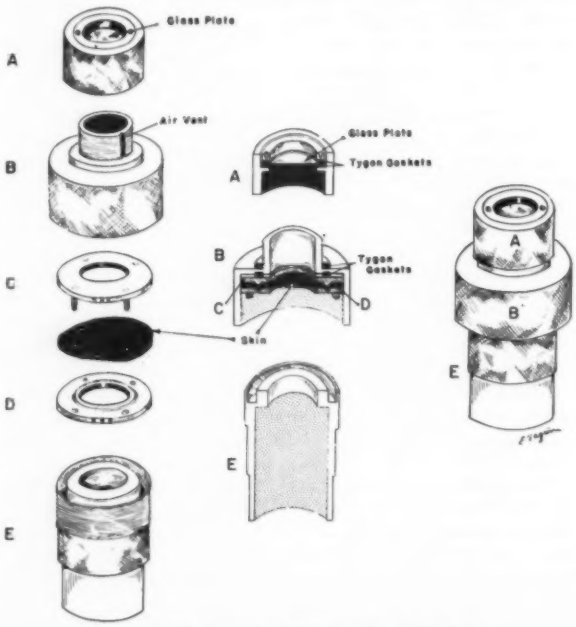

Figure 1—Chamber Used for Penetration Studies.

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skin from sliding and puckering as the chamber is assembled. The "tongue and groove" in the upper and lower rings make a tighter seal, to prevent seepage around the edge of the skin. Section B of the chamber screws onto section E and carries a tygon gasket to make a tight seal against the upper ring, C. The top surface of section E has a circular groove at the point where the pegs from C protrude. In order to prevent evaporation from the aqueous solutions which are placed on the skin, Cap A closes the space above the skin and seats against a tygon gasket on the top of section B. A vertical air vent permits Cap A to be screwed onto B without the development of pressure in the space above the skin. A glass plate in the top of the cap allows one to see the epidermis when necessary. This chamber was designed so that a liquid could be held on the dermal side of the skin also. In our experiments, this has not been done.

In these permeability studies, pieces of skin are cut to size. Before being placed in the chamber, their electrical conductivity at one volt direct current is measured (3), using electrodes 16 mm. in diameter. The skin is held directly between the two electrodes and the measurement made at once. We believe that electrical conductivity measurements can detect small breaks in the major barrier of the skin. Pieces of skin which show a high electrical conductivity are not used.

After its conductivity has been measured, the skin is placed between rings C and D, and the chamber assembled except for Cap A. Section B will hold about 5 ml. of the aluminum solution above the skin. Cap A is screwed tightly onto the chamber. No liquid is placed in E, but a pledget of moist cotton is kept in E to prevent drying out of the skin. The chamber is allowed to stand on a smooth surface at constant temperature for as long as exposure to the aluminum solution is desired.

At the end of the exposure period, the aluminum solution is discarded and the epidermal surface of the skin usually washed with several changes of distilled water. The chamber is then dismantled and from the center of the piece of skin a disc is cut with a cork-borer 16 mm. in diameter. This disc is held for one minute between two pieces of metal previously heated to 60° C. From skin so treated, the epidermis can be easily removed. Because some of the aluminum solution may have been mechanically carried by the cutting procedure to the dermis at the edge of the disc, and because the epidermis is difficult to remove from the edge, a second disc is cut with a cork-borer 10 mm. in diameter. This 10 mm. disc is analyzed for aluminum.

It is necessary to be able to determine aluminum quantitatively in microgram amounts in the presence of large amounts of orgainc material,—mostly proteins. The method which we have used was developed by John L. Jones, Jr.

Procedure for Quantitative Determination of Aluminum

I—REAGENTS

Hydrochloric acid, 5 N

Dilute 410 ml. of concentrated hydrochloric acid (A.R.) to 1000 ml. with distilled water. Standardize and adjust to 5.00 ±0.01 N.

Soluble starch, 1%

Mix 1.00 gm. of soluble starch with 5 ml. of cold distilled water. Add 90 ml. of boiling distilled water, and heat to boiling for several minutes. Filter through prewashed filter paper, cool and dilute to 100 ml. Prepare fresh every two days and filter through Whatman #5 paper (or its equivalent) just prior to use on the second day.

Thioglycolic acid solution, 2%

Dilute 2 ml. of thioglycolic acid Mathesons reagent grade or its equivalent to 100 ml. with distilled water. Prepare fresh every five days.

Ammonium acetate solution, 3.5 M

To a 100 ml. beaker partially submerged in ice water, add 220 ml. of 99.7% glacial acetic acid (A.R.) and about 200 ml. of distilled water. While stirring, slowly add 310 ml. of 28% ammonium hydroxide. After cooling, adjust to pH 7.5 and dilute to 1000 ml. with distilled water.

Ammonium aurintricarboxylate solution (Aluminon), 2%

Dissolve 1.0 gm. of the salt in about 400 ml. of distilled water, filter, and dilute to exactly 500 ml. with distilled water. Allow to stand 24 hours before use.

Acid-buffer solution

To a 200 ml. volumetric flask containing about 100 ml. of distilled water, add by means of pipettes: 20 ml. of 5 N hydrochloric acid; 20 ml. of 2 per cent thioglycolic acid; 50 ml. of 3.5 M ammonium acetate. Dilute to exactly 200 ml. with distilled water. Prepare fresh daily just prior to use.

Starch-aluminon solution

To a 100 ml. volumetric flash containing about 30 ml. of distilled water, add by means of pipettes: 30 ml. of 1% starch solution; 30 ml. of 0.2% ammonium aurintricarboxylate solution. Dilute to exactly 100 ml. with distilled water. Prepare fresh daily just prior to use.

II—DIGESTION PROCEDURE

Each 10 mm. disc of dermis is transferred to a 100 ml. pyrex beaker. (All glassware used in this test is kept scrupulously dust-free.) To each sample and to a blank containing no aluminum and no dermis is added about 5 ml. of distilled water and 1.4 ml. of concentrated sulphuric acid. Each beaker is covered with a watch glass and heated at medium heat on a hot plate until the appearance of sulfuric fumes; dense fuming is to be avoided, and the beakers should not be shaken during the digestion. The mixture should be brown, with perhaps some floating carbonaceous material. After cooling, 10 ml. of concentrated nitric acid is added, washing down the sides of the beaker in the process. Again the mixture is gently heated until sulfuric fumes appear, cooled and the procedure repeated with 5 ml. of concentrated nitric acid. If, after this treatment, the solutions are still dark brown, an additional treatment with 3 ml. of nitric acid should produce the desired light brown to yellow color. Following the nitric acid treatments, the solutions are thoroughly cooled and 2 ml. of 70% perchloric acid is *carefully* added. A well-vented hood is a necessity for this and the acid should be handled with extreme care, because perchloric acid is explosive when heated in the presence of organic matter. The digestion is carried out at a high temperature, without watch glasses, until the perchloric acid is evaporated, i.e., until a condensation ring is formed by the sulfuric acid. The treatment is then repeated, using 2 ml. more of perchloric acid, and successive treatments with 1 ml. of perchloric acid are made until the solutions are clear and nearly colorless, or until no further color change is noted. Samples must be *thoroughly cooled* before each addition of acid.

After the digestion is complete, the beakers are cooled, and their sides washed down with about 5-10 ml. of distilled water. The mixtures are brought to a pH of 3.3-3.7 with 7-10% sodium hydroxide solution and then diluted

to 50 ml. with distilled water. The electrodes are soaked in 10-20% hydrochloric acid for about thirty minutes before pH determinations. A 10 ml. aliquot of this digestion mixture is used in the colorimetric procedure, which follows.

III—COLORIMETRIC PROCEDURE

The 10 ml. aliquot of the digestion mixture is pipetted into a 50 ml. volumetric flask. (For accurate determination, the aliquot should contain not more than 20 μg. of aluminum.) Exactly 20 ml. of acid-buffer solution is added, mixed, and then exactly 10 ml. of the starch-aluminon solution is added and mixed. This is diluted to about 45 ml. and thoroughly mixed. The unstoppered flasks are held in a boiling water bath for exactly 4 minutes. After cooling at room temperature for about one hour, the stoppered flasks are placed in a constant temperature bath at 25° C. for 20-30 minutes. The volume is adjusted to 50 ml. With distilled water, the solutions well mixed, and their optical densities read in a spectrophotometer after another 5-10 minutes at 25° C. They are read against 10 ml. of distilled water which has been carried through the colorimetric procedure.

The authors have variously found 525mμ to be the optimum wave length on a Beckman Model B spectrophotometer, and 540mμ, on a Coleman Model 6A; this discrepancy seems to indicate a variance in instrument calibration. It would be advisable, therefore, to determine separately for each instrument the wave length for maximum absorption.

IV—STANDARD CURVE

Two standard curves may be prepared. A standard curve can be set up showing the optical densities of the color developed from aqueous solutions of known amounts of aluminum. For this curve, the solutions are processed through none of the digestion procedures which are necessary when organic material is present. The optical densities are read against a distilled water blank which has been put through the same colorimetric procedure.

A second standard curve is set up by digesting 10 mm. discs of dermis to each of which has been added a known amount of aluminum (0-100 μg). These discs are run through the same digestion and colorimetric procedures as the unknowns. It should be remembered that the color is developed from an aliquot of the digestion mixture, which contains only one-fifth of the total amount of aluminum originally added to the discs. The same distilled water blank is used for the optical density measurements for both curves.

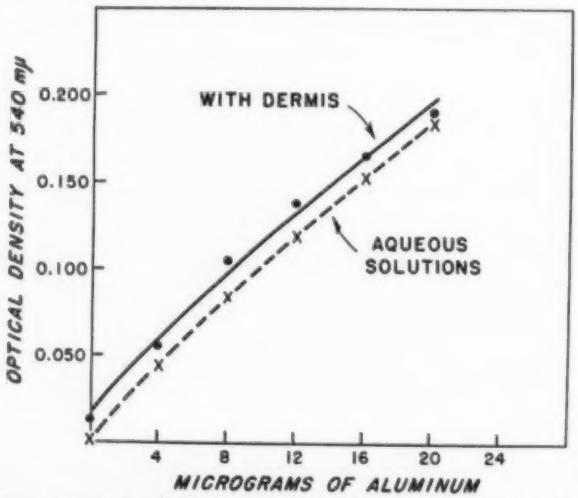

Figure 2—Standard Curves for Aluminum Determination. See text for experimental procedure.

The two standard curves are shown in Figure 2. They parallel each other reasonably well. The digestion procedure, made necessary by the presence of the dermis, adds to the optical density a small increment which seems to be reasonably constant for the range of aluminum concentrations studied.

Results

The volume of antiperspirant solutions held in contact with a given area of skin (5 ml. on 3 cm^2) in all of our experiments is much greater than that which would be in contact with the skin under actual usage conditions. The solution stays on the skin without change in concentration for the duration of the experiment. The range of exposure time in these studies is from 4½ to 23 hours. Only aqueous solutions have been used. In most of the experiments, the temperature has been held at 37° C. Usually, abdominal skin has been used.

In most of our experiments a 20% w/w solution of aluminum chlorhydroxide has been used. The amount of penetration has been determined on 22 pieces of skin taken from 8 subjects. It should be remembered that in the test the final color is developed from an aliquot of the digestion mixture equivalent to 0.16 cm^2 of dermis. In 19 of these tests, optical density readings have indicated that the solution contained less than 1 μg of aluminum. In the three remaining tests, colorimetric readings never indicated that more than 4 μg of aluminum was present in the dermis. Since all of these readings have been on the low part of the curve, we cannot say that we have actually demonstrated that there is any penetration into the dermal portion of the skin even after a 23-hour exposure to 20% aluminum chlorhydroxide.

Four pieces of axillary skin have been obtained. After 20% w/w aqueous solution of aluminum chlorhydroxide had been held in contact with pieces of this skin for 18 to 21 hours, less than 1 μg of aluminum was found in the dermis from two pieces of skin, approximately 3 μg in one piece and approximately 7 μg in another. Although measurable amounts of aluminum appear to have reached the dermal area in two out of four specimens of axillary skin, the number of tests is too small to permit one to draw any definite conclusions.

In previous studies which we have made on the penetration of sarin, an anticholinesterase agent, and sodium dodecyl sulfate, an anionic surface-active agent, we have been able to show that the rate of penetration of these substances into the dermis is very much acclerated when the stratum corneum, including the barrier layer in the skin, is removed before application of the penetrating substances. Removal of the stratum corneum and barrier may be accomplished by 10 to 15 successive strippings with a pressure-sensitive tape, such as Scotch Tape®. Removal of the barrier is accompanied by a 1000-fold increase in electrical conductivity of the skin. A 10 to 100 fold increase in permeability has been observed for sarin and sodium dodecyl sulfate.

In similar experiments, the penetration from a 20% w/w aluminum chlorhydroxide solution into six pieces of stripped skin from three subjects has been determined. Technical difficulties were encountered in these experiments, since this strongly hypertonic aluminum chlorhydroxide solution tends to dehydrate the skin after removal of the barrier, even if excess water is held on the dermal side of the skin. It is difficult to remove the epidermis from severely dehydrated skin.

Dehydration is not so great as to prevent removal of the epidermis, however, if exposure to the aluminum chlorhydroxide solution is limited to 5 hours. The results of measurements made on the six pieces of skin exposed to 20% w/w aluminum chlorhydroxide solution are in contrast to the results obtained from stripped skin which had been exposed to sarin and sodium dodecyl sulfate. In three of the six pieces, no measurable aluminum was found, and in the other three pieces less than 3 μg was found. This seems to indicate that aluminum chlorhydroxide penetrates poorly, if at all, into the dermal portion of the skin even when the barrier is missing.

Since many substances can easily penetrate into the dermis when the barrier is damaged, it is necessary to ask why the aluminum salts do not appear to penetrate under these conditions. The aluminum ion is known to be bound tightly by proteins. It might be that the aluminum ion is held so firmly by the cutaneous proteins, whether the barrier is present or not, that little of it can reach the dermis.

In order to test this hypothesis, another type of experiment was performed. After being held on normal skin for 21 to 23 hours, 20% aluminum chlorhydroxide was poured off, and blotted from the surface of the skin. Ten strippings were then made with pressure-sensitive tape. Discs (2 cm^2 in size) which had been cut from the strippings, were analyzed for aluminum—the first two as one group and the last eight as another group. From 15-50 μg of aluminum were found in the discs from the first two strippings and from 6-60 μg in the discs from the last eight strippings. Very little aluminum seems to penetrate further than the first few cell layers of the cornified epithelium.

The ability of aluminum to combine with proteins is influenced by the pH of the solution. The pH of the aluminum chlorhydroxide solutions has ranged from 4.0-4.5. One might expect a cation, such as aluminum, to combine less with proteins when the pH is low. A 20% w/w aluminum chloride solution ($AlCl_3 \cdot 6\ H_2O$) has a pH of 2.0-2.2. Five milliliter quantities of this solution have been held in contact with 8 pieces of abdominal skin from 4 subjects for 21-23 hours at room temperature. In six of these tests, optical density readings from aliquots of the dermal digest have indicated that less than 1μg of aluminum is present. In the other two pieces, 7 and 10 μg of aluminum were found. There is no evidence from these few experiments that the more acid aluminum chloride penetrates any better into the dermal area of the skin than does less acid aluminum chlorhydroxide.

Discussion

The experiments indicate that even under exaggerated conditions very little aluminum appears to reach the dermal area of the skin after exposure of the cutaneous surface to aqueous solutions of aluminum salts. Most of the data here reported were obtained from abdominal skin, but a small number of observations were obtained from four pieces of axillary skin. Had the aluminum salts penetrated directly through the sweat duct or through the epidermis and reached the sweat gland, they would have been detected in the dermal area by the techniques used. We now believe that the aluminum salts are prevented from reaching the sweat glands in any appreciable amount by the combining power of the proteins in the skin for the aluminum ion.

Whether or not the conditions of these laboratory tests adequately correspond to the conditions under which aluminum salts are actually used as antiperspirants remains open to question. We believe that it is fair to say that since such small amounts of aluminum have been found in the dermal area of the skin in these tests it is very likely that only small amounts of aluminum reach the sweat glands or the neighborhood of the sweat glands under actual usage conditions.

If the very small amounts of aluminum which have been found in the dermal area do not result from technical errors or uncontrolled conditions, but do represent the amount of aluminum that has actually reached this area from the skin surface, and if all of this aluminum is concentrated in the sweat glands, then it is possible that the amount of aluminum in each sweat gland would not be so small as the figures might at first suggest. It might possibly be sufficient to alter the physiological activity of the sweat glands.

Unfortunately, the data here reported do not permit us to draw definitive conclusions. It is our impression, however, that when more accurate data become available the amount of aluminum salt which can reach the sweat glands under normal usage conditions will be found to be to small to alter the physiological activity of these glands. If this impression is correct, any antiperspirant action which follows the local application of an aluminum salt will have to be explained on the basis of some mechanism other than an alteration of the physiological activity of the sweat gland.

Summary

A study of the penetration of aluminum salts from the surface of excised abdominal skin into the dermal area has shown that very little aluminum reaches the dermal area. Similar studies on four specimens of axillary skin gave somewhat similar results.

Very little aluminum salt was found to penetrate into the inner part of the stratum corneum of normal skin or into the dermis of pieces of skin in which the main barrier against penetration had been mechanically removed. Apparently the combination of aluminum with the proteins in the skin holds the aluminum in the outer part of the stratum corneum and prevents penetration to the dermal area.

Since the data reported here seem to show that so little aluminum reaches the area of the dermis, any antiperspirant action which results from the local application of aqueous solutions of aluminum salts is unlikely to be due to alteration of the physiological activity of the sweat glands by the aluminum salts.

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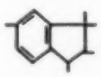
CORRECTION

In formulas (a) and (b) in Scheme II of Mr. Post's paper "Chemistry and Use of Polyalkylindan Musk Odorants," which appeared in the American Perfumer, March 1958. In formula (a) the two methyl groups at position seven belong on position one and in formula (b) the methyl group of position seven belongs on position one:

(a) from  to 

(b) from  to 

While Irving Bennett is distracted by a passing fancy Dr. Victor Fourman and Emery Emerson discuss the day's program

Notables at the meeting snapped just before the luncheon: Roy W. Hagelin, President James H. Baker and Earl L. Booth

SCC Groups Discus[o

All eager for luncheon: Carroll Reiss, Allen Ritch, Douglas Atlas, Mannie La Barbera and ever faithful Michael Stanton

The good fellowship which is always a dominant aspect of the meetings of the Society of Cosmetic Chemists added much to the interest of the mid year meeting held in New York June 4. This was particularly evident in the gathering of groups before and after and between sessions when members renewed old acquaintanceships and made new friends. But aside from the informal chats many took the opportunity to discuss matters of scientific interest prompted for the most part by the excellent program of timely papers presented. But the outstanding theme of many of the discussions centered around the forthcoming European trip sponsored by the Society for September 5 to 24 which will cover meetings in five countries: Italy, Germany, Denmark, Holland and Belgium. Meetings will be held with the German SCC and with other scientific cosmetic groups in the other countries. The International Congress of Cosmetic Chemists is also on the agenda. The annual Symposium of the Society to be held in the Autumn in the United States also proved to be a subject of much interest.

Mrs. Marie Wiener, public relations chairman of the New York Chapter and Mrs. Bettie Stanton exchange friendly greetings

Ferdinand Miller ponders a knotty thought provoking question posed by George Branigan on a perplexing chemical problem

ustoming Events

Gert Keller, President of the Essential Oil Assn., Miss Rachel Heald, Ex-President Dr. Kenneth Russell and Bernard Wirsing

Stephen Capkovitz, Dr. Henry J. Wing, Ex-President Sabbat J. Strianse and Pierre Bouillette chat about the morning program

With Benjamin Perry, left, and Herbert Perry, right, Theodore Binachi and Albert Shanksy learn why business is getting better

Gabriel Barnett, Education Committee chairman, explains his task to Nathan Fretz, Mrs. Penelope Wotherspoon and Lee Feltz

Dr. Oliver L. Marton, vice president of the American Society of Perfumers, answers inquiries by Irving Schlakman and Irving Colbert.

Essential Oils Train Bees for Fruit Blossom P

BJARNE E. BORUD*

Flower blossoms are attractive to insects as they are scented, coloured and provide nectar and pollen. The most common insects on fruit blossoms are the solitary bees, honey bees, bumble-bees and some flies. The flies visit any blossom regardless of species on one foraging trip. The wild bees and bumble-bees prefer to visit one kind of bloom at a time and the honey bees visit only the flowers of a single species on any one foraging trip.

By excluding insects from the fruit blossoms (by caging trees) practically no fruit will set. Most commercial varieties of fruits are self unfruitful, therefore cross pollination has to be brought about by insects. Insects in visiting flowers come into contact with stamens and stigmas and pollen grains adhere to their hair coat and are carried to other flowers. Only pollen grains of the same species perform cross fertilization. The honey bees in visiting only flowers of a single specie, are therefore of utmost importance in cross pollination.

The honey bee is the only pollinating insect that man so far has been able to breed.

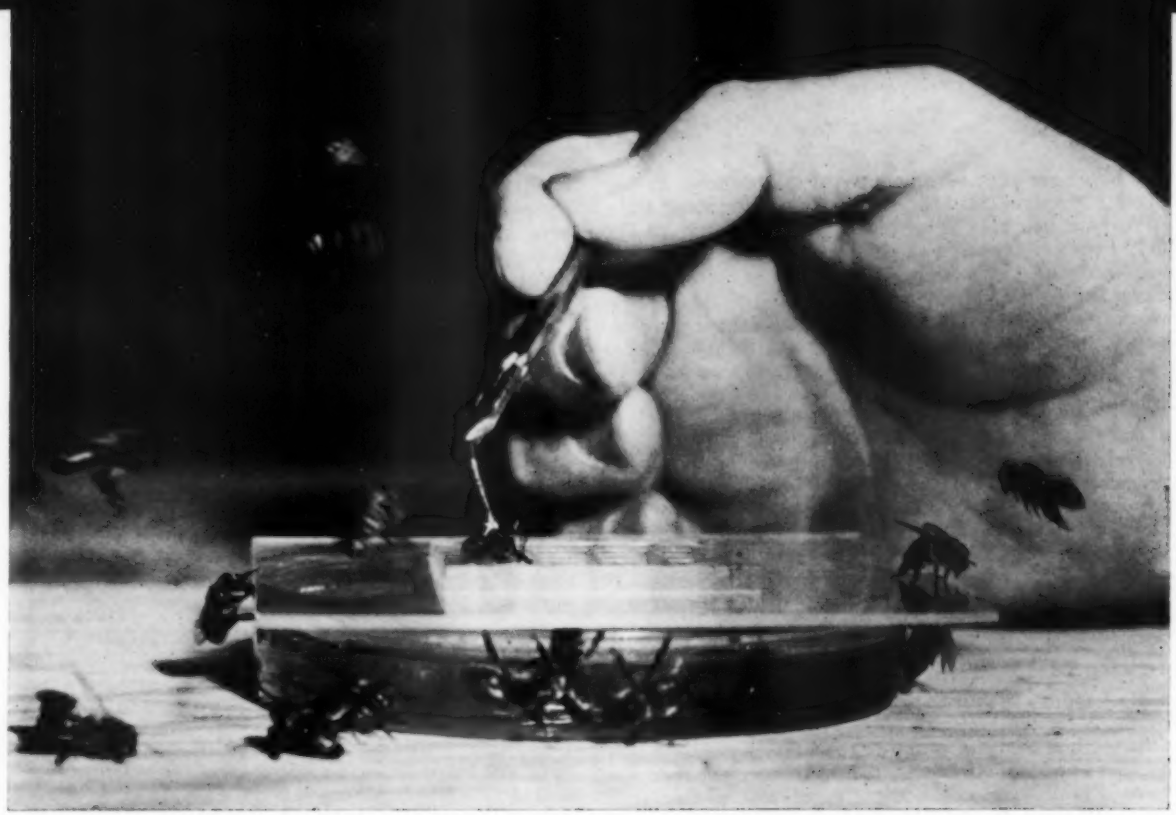
Plants Compete for Insect Visits

The plants compete in various ways for insect visits. Some plants, like the pear have only thin nectar to offer, while others such as the apple and dandelion have thick nectar containing up to 50% sugar during certain periods of the day. Some plants such as the apple, secrete nectar only during warm weather while others e.g. the dandelion, secrete also in cold weather. Buckwheat only secretes nectar very early in the morning.

In a bee hive one group of bees is assigned to indoor duties and consists of bees too young to take up field work. The other group brings in nectar, pollen and water. These bees either leave the hive unaided and scout for suitable sources, or they receive instructions from other bees on the field force. These instructions are in the form of samples of nectar given to the interested bees.

The scent of the bloom which is visited is obtained by touching the other bees hairy coat with the antennae. The experienced bee conveys the information

*Norsk A/S Bornengens Tekniske Fabrik. Lyngdal, Norway



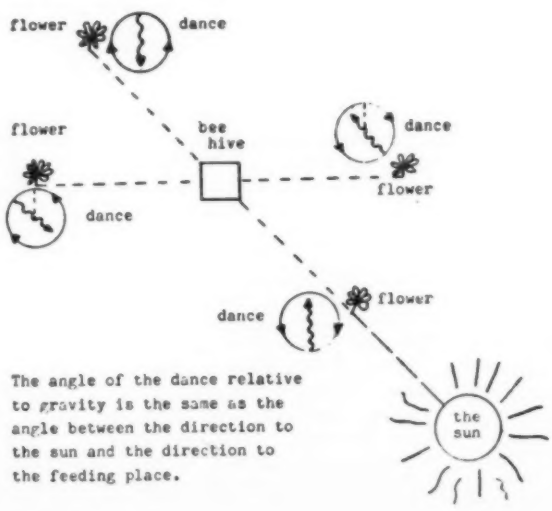
PLASTIC FLOWER FOR BEES

Bee culture specialists at the U. S. Tucson, Ariz. laboratory of the Agricultural Research Service mark bees as they feed on sugar solution from artificial plastic flowers set in shallow pans of sirup alongside the bee colonies. Equipment attached to the flower automatically records on graph paper the amount of sirup gathered by the bees and how many trips they make from bee hive to flower in any given period. U. S. Dept. of Agriculture specialists hope that their plastic flower studies will help solve some agricultural problems. The correct location of bee hives for honey production and pollination are among the more important of these.

n Pollination

about the direction and the distance by performing dances inside the hive. Prof. Karl von Frisch has for many years studied the life and the senses of the bees, (See literature references 1 and 2) and he has also found the meaning of the dances which the bees are performing. See Fig. 1. Bees performing a round dance show that the source is close to the hive; bees performing the tail-wagging dance show that the nectar is farther away. The number of turns in the wagging dance within a given time indicates the precise distance to the source, the fewer the turns the shorter the distance. Information on the direction is given by the angle of the dance relative to gravity and which is the same as the angle between the direction to the sun and the direction to the feeding place. The direction to the sun can be seen by the bees also in cloudy weather because they can observe the polarization of the light from the sun and they can also see the ultra violet light. The bees of field age heed these instructions, leave the hive, and land not too far from the source, and start work.

Fig. 1.
The tail-wagging dance of the bees.



The angle of the dance relative to gravity is the same as the angle between the direction to the sun and the direction to the feeding place.

If a bee can collect a stomachfull of nectar in a sufficiently short period of time, it will be confined to this area and work in it to the end of its life or until the blossoms fade. At blossom time about 1000 bees are born every day and release an equal number of home bees for foraging. Scout bees are always looking for new sources and many of the new field bees will follow their advice.

Honey bees are used for pollination of orchards in increasing numbers where the population of wild pollinating insects is inadequate for a satisfactory fruit set. The use of bees can be practiced in two ways: 1:

Bee hives are kept permanently in the orchard. 2: Bee hives are moved into the orchard at pollinating time.

When a bee hive is moved into a fruit orchard the field bees are found in the nearest neighbourhood and are thus the most effective pollinators. After a few days, the original field is depleted and the bees now work over a much wider area. If the field bees are deprived of their pasture, they must commence all over again. Then all the outside bees work as scout bees. If cross pollination of fruit trees is the aim, it is essential that the scouts find the bloom of the right species before they find blooms of different crops. It is therefore of great importance that the bees are not moved into the orchard before they can find the right nectar and pollen within the orchard. In spite of this it always takes a rather long time for the bees to get trained to the special blossoms. Adverse conditions such as bad weather and blossoms of other species in the neighbourhood will affect the training period very badly.

Training Bees

Beekeepers have therefore tried many artificial methods for training the bees to visit special blossoms. One method used for training the bees, uses the ability of scent and pollen to adhere to the hairy coat of the bees. Fresh blossoms are collected and placed in a special bed in front of the hive. To get into the hive, the returning bees have to pass through the flowers. The scent and pollen adhere to their coat and the untrained bees observe both as an instruction and start out to find the same source. Another method is to give the bees a sugar feed mixed with fresh blossoms which scent the feed. Feeding the bees with pollen is a third method which is used in some places. Unfortunately these methods are inconvenient. The blossoms and the pollen can not be stored from one year to the next, and the training period has to be delayed until the flowers are blooming.

The author together with a friend who is a beekeeper has for some years worked with a new method for training the bees for pollination of the blossoms of apple, clover and some other species for which the bee is the principal pollinator.

Summary of Experiments and Results

The blossoms of apple were collected and distilled in a Clevenger apparatus to obtain the essential oils. Because of the rather small number of blossoms available and the small amounts of essential oils present in the blossoms, only extremely small volumes of oil were obtained. In some of the experiments it was not possible to use the separator and the reflux head of the Clevenger apparatus, instead the essential oils had to be extracted with solvents from the total distillate.

Some of the essential oil obtained was mixed with a small volume of ethyl alcohol and added to sugar feed which was given to the bees in the usual way. To observe the effect the number of bees returning to the hive was counted. It was found that bees, which before the feeding only pastured on dandelion and returned with the yellow pollen of this blossom, changed their foraging habit when given a feed containing the apple-blossom oil. On the following days they returned largely with the light coloured pollen of the apple blossom. Hives which were only given sugar feed without the essential oil from apple blossoms, went on foraging the dandelions.

To observe the effect of the training on the pollination, hives were placed at different locations in orchards. Some of the bees were fed with sugar feed together with the apple-blossom oil, others got only sugar feed. In the autumn the amounts of apples in the neighborhood of the hives were compared. In two orchards the amounts of apples on the trees close to the hives of the bees given the sugar feed containing the apple-blossom oil, exceeded significantly the amounts of apples in the neighborhood of the bees given only the sugar feed. In one orchard the effects were not observable, and the amount of apples was very small. The probable reason is the very bad weather during the pollination period. The two first mentioned orchards probably had some sunshine between the showers, the other orchard had only rain.

The amounts of honey in the hives were also compared, but did not give significant results.

The pollen collected in the wax frames in the hives was also investigated. The colour of the pollen showed clearly the origin. Colour photographs did not give sufficient distinct colour differences to justify publication.

Some of the essential oils from the apple blossoms were stored at 3 degrees Centigrade until the next summer and were then fed to the bees in the same way. The results were comparable with those of the first year, also in this year rain made the pollination very poor and many experiments were without value.

Only a very small amount of appleblossom oil was left for analysis but the results, together with information gathered from the literature have made it possible to compose a mixture of synthetic essential oils. The mixture has been tried on a larger number of colonies over the last two years and it has been found that the training effect on the bees is the same.

Similar work is under way or already completed with the flowers of melon, pear, apricot and clover. The essential oils of the flowers have been extacted, some have been used for training experiments and the rest has been analysed. The results have indicated how synthetic mixtures should be composed.

Results with Synthetic Clover Oil

Experiments with a sugar feed containing a synthetic clover oil have given amazing results. The clover field gave a yield of clover seeds approximately four times that of fields pollinated only by untrained bees.

Conclusion:

Experiments have shown that it is possible to use essential oils for training bees to visit and pollinate blossoms of special species. The same effect can be obtained with natural and synthetic oils.

Acknowledgment:

I am indebted to my friend beekeeper Mr. Otto Tangen for help in providing samples of blossoms and for undertaking the experiments with the bees. I do also thank Mr. Jack Pickthall, F.R.I.C., for reading the manuscript.

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Photo Courtesy of General Aniline & Film Corp.

Evaluating Antiperspirant and Deodorant Products

G. W. FREDELL and DR. J. LONGFELLOW*

The following methods are based on methods and techniques tried in several laboratories to determine antiperspirant effect and deodorant effect of preparations used in the axilla. For this work, the studies are conducted directly in the axillary areas. (Later if studies in other than axillary areas or *in vitro* can be correlated with data obtained directly in axillary areas, consideration will be given to such test methods.)

Procedure for Antiperspirant Test

1. Subject having used no deodorant or antiperspirant for a week, having used no deodorant soap for this week (olive oil, castile or Ivory soap permissible in axillary areas) and having shaved the axillary areas is set up for a test beginning on Monday.

2. Monday, 9 a.m. Collect 3 to 6 pieces of control data of weights of perspiration obtained simultaneously in left and right axilla of the subject. This is done by placing tared absorbent pads in the previously dried axillae and having the subject keep the upper arms close to the body to hold the pad in place. Each set of pads is retained in the axillae for from 15 to 30 minutes or until a minumum of 100 mg. of perspiration is collected from the least perspiring axilla. The number of determinations made is governed by the closeness of the check ratios obtained by the following calculation

$$\frac{\text{Wt. perspiration from R axilla}}{\text{Wt. perspiration from L axilla}} = \text{ratio } (pR)$$

pR = perspiration ratio

3. Monday, 12 noon. Apply preparation under test to the axilla which perspires the most.

4. Monday, 1 p.m. Collect 3 to 6 pieces of data of weights of perspiration obtained simultaneously in left and right axillae as under collection of control data. Calculate pR.

5. Tuesday, 9 a.m. Apply preparation under test to same treated axilla as on Monday.

6. 10 a.m. Collect 3 to 6 pieces of data of weights of perspiration as before. Calculate pR.

Antiperspirant and Deodorant Products

7. Wednesday. Repeat Tuesdays routine of applying preparation and collecting weights of perspiration. Calculate pR.

8. Thursday. Repeat Wednesdays routine. Calculate pR.

9. Tabulation of data. Average the usable data, control and after 1, 2, 3 and 4 applications of the test preparation and note the alteration in the pR as a result of the antiperspirant preparation.

Comments on the Antiperspirant Test

Numbers refer to the corresponding numbers of the paragraphs of the test procedure.

1. The paragraph is self-explanatory.

2. Pads used must cover the perspiring area of the axilla which is delineated by the hairy area. Pads used by various workers have been made of:

(a) Absorbent paper wrapped in gauze and measur-

* Reprinted from the Journal of the Society of Cosmetic Chemists, Vol. 9, No. 2, 1958, Page 108

ing about 3 × 5½ and ½ inch thick. This pad when folded and shaped like an inverted U was easily retained in direct contact with the axillary surface when the upper arm held close to the body.

(b) Zofec pads of J & J are held in place by means of ping pong balls.

(c) Webril No. #R2801 pad material from Kendall Mills serves as the absorbing material.

Other means of determining amounts of perspiration in L & R axillae such as snug fitting metal cups with dry air circulating may serve as a better technique.

The arbitrary figure of 100 mg. of perspiration as a minimum is based in experience in the handling of pads.

Depending on the laboratory conducting tests related to the method described here, the subject has been subjected to various conditions.

(d) Subject continues at regular work but in such a way that the pads are retained in close proximity to the axillary surface.

(e) Subject placed in conditioned room with hands and wrists immersed in warm to hot water.

(f) Subject exercising in a conditioned room on an exercycle.

(g) Subject walks a treadmill in a conditioned room.

In general, elevated temperature conditions can increase the output of perspiration but the *pR* of the subject is not altered by these conditions. To facilitate the collection of data, it may be advisable to subject the subject to conditions stimulating perspiration.

Because pads can slip out of place during the time of wearing and possibly affect the quantity of perspiration absorbed, the number of pieces of data will depend on the agreement of the *pR*'s determined.

3. If Monday is devoted to obtaining control data, the first application of the preparation under test can be made at 9 a.m. Tuesday morning and perspiration weights gathered from 10 a.m. on. The test would then extend to Friday so that one could obtain data on 4 applications of the test product.

The product is applied to thoroughly cover the hairy portion of the axilla. (Experience has shown that antiperspirant creams have not come off on the pads for collecting the perspiration to affect the weights of the pad.)

4-8. Comments on these sections have been taken care of under 1, 2 and 3.

9. The per cent effectiveness of the preparation is calculated for each day the subject is on the test.

For preliminary work to check this ratio method, which is presented here because several laboratories have obtained agreement, a bench mark preparation should be agreed upon. One laboratory has found a buffered Aluminum Chloride solution to be an effective product with multiple applications. This preparation is suggested as the bench mark preparation to be used in checking agreement between laboratories in establishing this procedure.

Procedure for Deodorant Test

1. Subject not to use any deodorant or antiperspirant for a week; also use no deodorant soap for this week (olive oil, castile, ivory or other bland soap permissible in auxiliary areas). No shaving of the axilla is required.

2. Test day, 9 a.m. Determine odor levels in L and R axillae according to the following scale: 0 none, 1 slight, 2 definite, 3 strong and operpowering.

3. 9:05 a.m. Apply to one axilla the preparation under test.

4. 3 p.m. Determine odor levels in L and R axillae of the subject.

5. If subject is used on succeeding days, the control axilla should be kept as the control.

6. Tabulate results on subjects who have at least a 2 odor in the control axilla.

Comments on the Deodorant Test

Numbers refer to the corresponding numbers of the paragraphs of the test procedure.

1. The paragraph is self explanatory.

2. The odor levels enumerated have been published in an article in *Soap*. A group of some 30 persons interested in deodorant testing and representing 16 laboratories had a meeting to discuss axillary odors. Their conclusion was that the odor was characteristic and that essentially 5 levels can serve to answer evaluation questions. The level of "overpowering" was included on the basis that some studies have been made with evaluation of axillary odor from that area of a T shirt. Direct sniffing of the axilla has not yielded a level as high as overpowering but clothing such as a T shirt has. At this time, these 5 levels are suggested as covering the necessary range and also permitting evaluation on clothing if interested parties consider that this should be included in a test procedure.

First consideration should be given to odor levels obtained by direct sniffing of the axilla. One laboratory found a correlation between direct sniffing of the axilla and that obtained from a 1-inch cotton ball swab of the axilla stored in a 1-oz. ointment jar with the cap liner removed from the cap of the jar. On repeating this work more than 5 years later, it was found that the odor on the swabs dissipated rapidly so they could not be used. The nature of the swab material varied from the original used and can account for the trouble. At the present time, Zobec pad material seems to retain axillary odors and correlate with direct sniffing of the axilla. Whatever is used must give comparable data with direct sniffing.

3-5. These paragraphs are self-explanatory.

6. Laboratories have found like odor intensities in L and R axilla when no deodorant preparation has been used. Therefore, the control axilla must have a definite characteristic axillary odor in order to judge the effectiveness of a product used in the treated axilla. For checking between laboratories, the bench mark preparation mentioned under Antiperspirant Test is suggested.

"Who said our rouge was in the red?"

A Pioneer American Flavorist

The career of the energetic Dr. Alexander Katz who served the United States and foreign governments, science and industry and what he did in developing the flavor industry in the United States

M. H. BAKER*

Dr. Alexander Katz was a pioneer in the development of American flavor chemistry. His foresight, vision and skill contributed to the establishment of a flourishing industry based on the application of organic chemistry.

Dr. Katz was born on May 6, 1887, in Odessa, Russia. His father, M. Jacob Katz, was German by birth, and his mother, Fanny Katz, was Russian. At the time of Dr. Katz's birth, his father was already soundly established in the flavor and aromatic chemical industry, as a partner in F. Ritter & Co. in Leipzig, Germany, founded there in 1876.

Alexander Katz's childhood was not too far out of the ordinary for someone living in Russia in those days. As an only son (he had five sisters, and had had one brother who died in infancy), it was traditional for him to take on the family business which, in those days, was not hard to do as the business and the home were more or less combined. He went through preparatory school in Odessa and to the Technological Institute in Kharkov; and, in 1904, went to Switzerland to study at the University of Lausanne where he stayed until 1907, and from which he received his B. S. degree in Chemistry. During this time the revolutionary agitation in Russia became progressively greater, and his father decided to move children, plant and all to the United States. This was done about 1905, while Dr. Katz was still in school in Lausanne. As the family roots were no longer in the motherland, upon finishing his studies at Lausanne, Dr. Katz moved to the United States, arriving in New York with his wife, whom he married in Lausanne, in 1908. Trying to take hold of his father's business, while at the same time attending Columbia University for his doctor's degree, as a student of Dr. Morris Loeb, he was kept quite busy. His PhD thesis dealt with saccharin and various by-products. It was during these years that he developed many new methods for the production of aromatic chemicals, such as rhodinol and phenyl ethyl alcohol. With the passing of his father in 1913, Dr. Katz had to take full charge of the business and at the same time support a family of his own, as well as his mother and sisters. He gave unselfishly of his time, his effort and whatever money he had to his family and his work.

First to Manufacture Saccharin

In the pre-World War I era, Dr. Katz and his associates made up the first company in the United States to manufacture saccharin on a commercial scale; at this time, by accident, they also invented what may have been the first washing machine; for on March 6, 1922, Dr. Katz received a patent on a "Chemical Filtration and Washing Apparatus," which also turned out to be the first inverted suction washing machine. Since finances were very much lacking at the time, the patent was sold to the Mayflower Washing Machine Co., and Dr. Katz received a small royalty for this.

A gifted musician in his youth, there were, periodically, questions as to whether science or music would win Dr. Katz's main interest. While science ultimately succeeded, it is notable that music was a continuous interest throughout his life. Many notable musicians were among his friends, and in later years he acquired an excellent collection of violins.

Harvesting Dill in Eugene, Oregon

*Editor, Minnesota Chemist; Secretary of the Minnesota Section of the American Institute of Chemical Engineers; former president Minnesota Industrial Chemists Forum; member of the American Chemical Society and a founding member of the T. C. Chapter of the Institute of Food Technologists. Presented at the 133rd national meeting of the American Chemical Society, San Francisco, Calif., April 15, 1958.

Service to U. S. Government

Dr. Katz was truly one of the pioneers of the foundation of the American flavor industry as it exists today. Anticipating the needs of the growing economy, he served government, science and industry in many ways. During World War I he worked with the Alcohol Tax Unit as consultant on the proper denaturing of alcohol, along with Dr. G. Sale, who became one of his close friends. Later he served with the Federal Food and Drug Administration toward establishment of many standards and test methods on important essential oils. In 1945, '46 and '47, he worked with the California State Department of Agriculture and the California Polytechnic School on the development of the essential oil industry in the United States. He published a paper on this in 1947. In his remarks he noted the acutely felt need for American independence in the growth, cultivation and production of raw materials yielding the essential oils so important to the flavoring, pharmaceutical, medicinal, perfume and other industries.

He urged that efforts be made to upgrade agriculture through the introduction of economic farming, and commented, "After World War I we became completely independent in the production of aromatic chemicals, such as alcohols, esters, aldehydes, etc., as well as many other chemicals. This, however, did not apply to essential oils." He went on to note that "some essential oils have been distilled in the United States since the beginning of the 19th century."

Oils Produced in the U. S.

He pointed out that the United States was in a position to supply not only its own needs, but also the needs of other countries for such oils as orange and lemon. He called attention to the production of oil of peppermint in upper New York state, in Indiana and Michigan, and to the recent production in Oregon and Washington of both peppermint and dillweed oil, also of the periodic availability of botanicals yielding wintergreen, sweet birch, wormwood and sassafras. He emphasized the pioneering by California growers in oil of sweet basil, spearmint, and he urged the cultivation of varieties of celery high in essential oils content.

In looking forward, he suggested the cultivation of coriander yielding a U.S.P. grade oil which is rich in linalool and in decyl aldehyde. He pointed out that linalyl acetate, geraniol, citronellol and their esters, as well as citral, could be made from linalool. He urged the production of oil of anise, now almost entirely supplied by China, and currently not too readily available, as a result. He stated, "The Pacific coast, particularly California, is geographically and climatically well-suited to the cultivation of botanicals for the production of many essential oils. . . . If it pays to grow alfalfa, it will surely pay to grow dillweed or other botanicals for essential oils." Besides the growth of the ingredients for industry, he was also interested in improving processing methods. He described many of the methods used as crude, and even primitive, and stated "our objective in the United States should be to produce better products with the aid of modern engineering and equipment."

Vanillin from Yucca

Working with Monroe Kidder and Dr. Alvah Hall, he produced lignin and vanillin from yucca grown in California. He was the first chairman of the Scientific Research Committee of the Flavoring Extract Manufacturers Assn. of the United States and studied dermal irritating properties of the essential oils and synthetic aromatics used in flavoring and perfumery.

Isolation of Flavor Components

Hours of work were never noted by Dr. Katz. It was an everyday thing for him to be at the plant at seven or eight in the morning and continue until seven or eight in the evening. He was not strictly an executive's executive. As president of F. Ritter & Co., one would expect him to be an office executive; however, he derived too much pleasure from working in the laboratory, analyzing new products, and contriving new methods for their manufacture, to be stuck behind his desk.

He and his associates isolated many flavor-giving compounds from their raw materials and then set out to synthesize these, as identified, making them available as new and less expensive tools of the flavor industry. Dr. Katz and his associates, individually and together, published the results of their work in this field periodically. In the American Perfumer and Essential Oil Review for October 1949, Abraham Seldner, one of Dr. Katz's associates, before introducing a list of approximately 100 new essential aromatics stated: "All the materials listed were synthesized to obtain pure aromatics by physical, organoleptic and olfactory criteria."

In the same journal in May of 1951, Katz and Seldner described some of the later results of their work in applying botanicals resulting from economic agriculture to the flavor industry, as follows: "One of the first successful experiences in the course of this work with a product transplanted from a distant native habitat was the large-scale cultivation of foenugreek seed. 100 acres of this seed were raised, and the extract made from this produced an imitation maple flavor base as good as that obtained from the Moroccan seed."

Work with Botanicals

They also described work done with rose geranium oil, successful work done with oil of sweet basil, with summer savory oil, labdanum. They remarked that dillweed raised in the Imperial Valley returned an oil of sufficient interest to warrant experimental use by a large San Diego pickle manufacturer. They described work, some successful, some only moderately so, done with coriander, with palma rosa grass of Indian origin and vetivert root, also brought in from India; and they projected work to be done with the tuberose, which grows wild in California. They also described a project that had been moderately successful, leading to the production of thymol from California bay tree oil. They also described work done with pennyroyal, tarragon and many other botanicals. In each case they indicated the yield of aromatic chemicals derived and made suggestions for future development work.

Development of Synthetic Aromatic Chemicals

They also pointed to continuing work in the development of synthetic aromatic chemicals, describing, for example, the intense grape character which is imparted by cinnamyl anthranilate. They indicated that they had synthesized methyl beta methyl thiol propionate, a material found to be present at the rate of one gram per ton in Hawaiian pineapple; they noted that allyl undecylate reminds one of cocoanut; and many other of their developments, including work on a new indol, etc. Dr. Katz gave credit, in his various publications, to pioneers in the chemical investigation of odoriferous products and essential oil components, like Tiemann, Barbier, Wallach, Semler, Hesse and many others. In his review, entitled, "Historical Facts in the Development of Aro-

matics," published in the November 1955 *"Scalacs,"* Dr. Katz stated, "The research started by those pioneers is still going on. Although a great many products are now made commercially, there are countless future possibilities for *new* aromatics. Not too long ago, some of the aldehydes, esters, ethers and ketones were regarded as rare compounds. Today they are available in abundant quantities at reasonable cost."

In the same review, Dr. Katz described new work done to determine the basic organic compounds present in floral odors, in several of the fruits, in garlic and onion, as well as work done subsequent to the identification of these various constituents to synthesize the materials in question.

Dr. Katz had many friends and enjoyed meeting them on his many trips throughout the United States and the rest of the world. He was probably one of the most traveled men in the industry. He was the guest of many governments helping them with their food and cosmetic industries. Some of these governments and large companies in foreign countries whom he served include such places as France, Mexico, Belgium, Holland, the Soviet Union, Switzerland, and more recently, in the middle east, in Israel. He was constantly invited by these various governments as their guest to help them in whatever way he could and many officials came to California to visit him. Because of the vast knowledge he carried with him, many questions would be answered spontaneously, and if they *could not* be answered spontaneously, they were *worked out* spontaneously.

In 1947, Dr. Katz discovered vanifolia growing in the Hawaiian Islands and worked on an ultra-violet controlled laboratory cure for these vanilla beans. This led to speeding the curing of the beans to days instead of weeks, due to the fact that the beans were constantly under ultra violet rays instead of being in the sunlight during daylight only. Dr. Katz's almost constant travel, three or four trips a year throughout the United States, and at least one trip a year to Europe, the Middle East and the rest of the world, netted him endearing friends. He undoubtedly pioneered the flavor industry in the western part of the United States. His trips to California, Washington and Oregon started as early as 1924. He was quick to realize the concentration of raw materials on the Pacific Coast, and by 1945 had set up production facilities in the area. At that time, he set up what is today one of the most modern aromatic chemical and flavor concentrating plants in the industry and the only one west of the Mississippi river. From this unit has come a steady stream of new products, basic and applied. Methods were devised here for concentrating citrus oils, berry juices, butter, and much more. During World War II, Dr. Katz served with the National Office of Civilian Defense as consultant on war gases and how to determine when they are present. During the last twenty years of his life, Dr. Katz was constantly on call by various institutions, colleges and universities as a consultant and lecturer. From his laboratories came frequent help to others in the field as well and, as noted, a continuous stream of basically new chemical compounds. He was a co-founder of Florasynth Laboratories and was instrumental also in starting other firms, now competitors, in the production of flavor raw materials. His death came in March 1957. His drive and determination today make it possible for his two sons, Leonard and Allan, and his widow, Mrs. Isabelle Katz, to carry on, as a third generation, the work which they have inherited.

At the present time, the Alexander Katz Memorial Scholarships are being instituted through the Institute of Food Technologists to keep young people who are interested in the aromatics and flavor field in school, which they otherwise could not afford to attend.

Some publications in which Dr. Katz had a part include—The Deterpenization of Essential Oils; Dermal Irritating Properties of Essential Oils and Aromatic Chemicals; The Need for Developing an Essential Oil Industry in the United States; Lignin and Vanillin from Yucca Brevifolia of California; New Aromatics for Flavoring and Perfume Industries; California Essential Oil Development; Highlights on Newly Developed Flavoring Aromatics; and Historical Facts in the Development of Aromatics. Many more were published.

New Product Rate of Failure

Countering the profit sag has become the major preoccupation of much of top management today. A recent survey has indicated that aside from intensified sales activity, cost-cutting and other steps, a large proportion of companies are seeking the new products route.

New products activities are full of pitfalls as indicated by the high failure rate and high cost of even successful new products. Depending on which survey you read, the new product rate of failure can be from 50 to 98%. Some of the reasons for lack of success are indicated by typical conditions in some companies as outlined in a recent issue of the Harvard Business Review:

—The executives who want new products but do not know or cannot agree on what kinds of products to be interested in.
—The inventors who do not know what to invent.
—The laboratory crowded with development projects, but with few new products coming out, and too many of these are not paying off.
—The downhearted idea-man whose brain child was squashed for unexplained reasons.
—The "floating" product idea that has been considered for years, but has never had a decision made on it.
—The "bootleg" project in the laboratory that management does not know about.
—The "orphan" project that goes on and on because nobody has given it the thought or had the heart to kill it.
—The "bottomless hole" product that took three times as long and cost five times as much as expected, and finally got to market behind all other competitors.
—The product with "bugs" that were hidden until 10,000 came back from consumers.
—The "me too" product that has no competitive reason for existence.
—The product that had the sales "engineered out of it."
—The scientific triumph that turned out to have no market when someone thought to investigate it.
—The sales force that jumped the gun ahead of production.
—The sales force that was not "interested" in the added product.

Of course, such conditions exist mostly in companies that are not organized for new products. But it is surprising how frequently we have run across at least some of them in the course of our work.—**Chemonomics of Aries Associates, Inc.**

1.

1. CARBISULPHOIL CO.

A counter-selling display unit containing twelve packages of Foille, liquid antiseptic-analgesic dressing for burns, sunburn, cuts, etc., is the standard shelf-carton marketed by Carbisulphoil Co. A new 3 oz. Foille aerosol spray for sunburn supplements the bottled product. Bottled product comes in a white folding carton with yellow and black printing.

2.

2. SHULTON

The promotion of Shulton's Hand and Body Lotion and Beauty Clean Lotion-Cleanser in the new travel-set is being beamed at vacationers. The set comes in a gold-foil display box screened black and white with the Desert Flower decor. It contains two ounces of each in flat, hand-size, light plastic bottles. The bottles are pink and white, each in reverse coloring for quick identification, and topped with fluted white caps. The set retails for $1.50 plus tax.

3.

3. DOROTHY GRAY

Dorothy Gray offers new concentrates in Voltage, Nosegay and Figurine, in slender, plastic-covered atomist bottles of pink, blue and white respectively. Decorative and spill-proof, they are ideal for desk drawer or for traveling. 3 oz., $2.75.

4. TINKERBELL

Tinkerbell has introduced a new roll-on "Gentle Deodorant" and "Spray Mist Cologne," in a handy plastic kit. According to the manufacturer, the deodorant is specially formulated for delicate young skin and the spray mist cologne provides exactly the correct fragrance for the growing-up girl. The plastic kit makes them handy travel items.

4.

5.

6.

5. CIRO

Ciro is introducing Duo, a new package in their perfumes that is an unusual gift combination of Esscent Mist and matching purse perfume, all for the price of the Mist. The Mist comes in a jet spray atomizer, 4 oz. and the perfume in a ¼ dram replica of the larger bottle.

6. NORTHAM WARREN

Northam Warren announces the addition of three new colors to their present range of Pearl polishes—Gold, Silver and Orange Gold. Cutex is offering a deal containing two dozen bottles of the Pearl polish. White Pearl and Pink Pearl are included with the new colors. A counter card is packed with each deal. It bears the caption "You're The Girl For Pearl" and displays shade samples.

7. YARDLEY

Yardley of London launches a major, mid-summer promotion of its Red Roses fragrance line in August, spearheaded by the introduction to Red Roses cologne. To command attention at the point-of-sale, a colorful counter display unit highlighting the new cologne is available to retail accounts. Additional merchandising aids include a window panel, cologne tester, and advertising mats. Red Roses cologne will retail for $2.00 for three and one-half ounces.

7.

8. TUSSY

Tussy has introduced a new concept in skin care for the woman over 35. Called Beauty Diet, it is a set of two products featuring Beauty Diet Cream and Beauty Diet Capsules, a blend of vitamins and minerals to act as a dietary supplement. Beauty Diet Cream is presented in white opal glass, silk screened in gold, with a gold plated plastic cap. The aqua and white capsules are contained in a white opal apothecary bottle, silk screened gold, and with a gold plated glass stopper. Jar and bottle are packaged in an embossed white and gold hinged-top box and priced at $10.00 for the set.

8.

Seated on dais at the meeting of the Scientific Section, left to right: Walter W. Edman, newly elected vice-chairman of the Section; Charles Fox and Dr. Donald H. Powers, winners of the 1958 CIBS Award; Dr. Paul Klarmann, chairman of the Section; William L. Jaeger, president of CIBS; J. C. Ervin, who becomes chairman of the Section and Dr. F. J. Austin, honorary chairman of the Section.

Maine Host to T. G. A.

The basic purpose in holding the annual convention of the Toilet Goods Assn. in Poland Springs, Maine this year in order to give the members an opportunity to know each other better and to know more about the association and its work for the benefit of all was fulfilled at the meeting June 25-28. There were no distractions, the golf course was closed during the sessions and as a result they were well attended and some vital matters advanced by retiring President Pierre Harang, by George P. Larrick, Commissioner of Food and Drugs of the U. S. Dept. of Health, Education and Welfare and of General Counsel Earl W. Kintner of the Federal Trade Commission unquestionably reached home and will have a salutary effect on the entire toilet goods industry.

Unfortunately, due to a combination of circumstances, the attendance of active members was somewhat disappointing. Some stalwart figures in the industry who have always been seen at T. G. A. conventions were missing.

Only 16% of Active Members Present

All told 348 adults of which 114 were women, mostly wives of the representatives of the active and associate member companies' representatives attended the convention. These included association staff representatives, publications, representatives from other associations, speakers, counsel, etc.

Despite the efficient work of the T. G. A. staff slightly less than 16% of the active member companies and about 30% of the associate member companies were represented at the convention. It is a little confusing to give a precise picture because private brand cosmetic manufacturers who supply active member companies which sell to retailers, door-to-door or by mail are classed as active members themselves.

There are 244 active member companies in the association and only 39 of these (less than 16%) were represented at the convention. The total number of adult representatives of these 39 active member companies was 93 of which 34 were women, mostly wives of representatives. There are 239 associate member companies (suppliers to active member companies) of which 73 (about 30½%) sent representatives to the convention. The total number of adult representatives of the associate members was 211 of which 68 were women, mostly wives of the representatives.

New Officers

The following officers were elected:

Arthur E. Johnston
President

President, Arthur E. Johnston, assistant secretary, Colgate-Palmolive Co.

Vice Presidents: Oscar Kolin, Helena Rubinstein Inc.; Jean Despres, Coty Inc.; J. I. Poses, D'Orsay Sales Co.; and Robert E. Schwartz, Wildroot Co.

Treasurer, Philip C. Smith, Yardley of London Inc.

Secretary, William F. Denney Jr., Frances Denney Inc.

To fill the two year terms caused by the election of Mr. Kolin as vice president and the resignation of Lewis F. Bonham formerly of Bourjois as directors, Henri Costerg, Dana Perfumes Corp. and Lessing L. Kole, Kolmar Laboratories Inc., were elected.

Re-elected as directors for three year terms expiring in 1961 were: Robert B. Brown, Bristol-Myers Co.; C. W. Godefroy, Godefroy Mfg. Co.; John E. Hardy, Daggett & Ramsdell Inc.; William Mennen Jr., the Mennen Co. and Richard Salomon, Charles of the Ritz, Inc. New directors for a three year term are Stuart K. Hensley, Toni Co.; and George Kremer, Roux Laboratories Inc. For directors representing associate members, a two year term, Dr. Lloyd Hazelton, Hazelton Laboratories and Edward P. Morrish, Firmenich & Co. were elected.

Winners of Golf Trophies

Winners of the golf trophies were: Cecil Smith Memorial trophy, Robert Miller; B. M. Douglas trophy, Peter Forsman; B. E. Levy trophy, George Davidson; and Maple Leaf trophy, Timothy McGrath.

Most Significant Addresses

The keynote for the address by F. T. C. General Counsel was given in the presidential address by Pierre Harange who said: "We as an industry should be more vigilant in cutting down the incidence of advertising claims that invite criticism. There is no question that one of the things that harms our industry most is borderline advertising."

His concern and that of association headquarters expressed in a recent bulletin was justified, judging by the addresses of Mr. Larrick and Mr. Kintner, highlights of which will be published in the next issue together with abstracts of other papers.

New PRODUCTS & IDEAS

COLD SOLDER

Schramm Fiberglass Products now offers its new-principle Twin-Weld Cold Solder, a new type plastic adhesive. When spread between two surfaces, the plastic reaction that occurs (caused by heat) alters its make-up and reportedly links the bonding surfaces into a permanent bond. According to the firm, it can be sanded, painted and finished like steel itself. It is said to remain workable for hours, and have a long pot life.

HOMOGENIZER-DISPENSER—1

A new mechanical high frequency wet-milling and mixing device, available in four models, is being manufactured by the Bronwill Div. of Will Corp. The outstanding feature of the Bronwill Polytron is its milling head, a precision ring-within-a-ring combination of shearing blades. The inner ring of shearing blades, revolving at speeds up to 18,500 RPM on a central shaft, is encased within a stationary ring of shearing blades that is attached to a stationary outer tubular shaft. The inner ring, rotating at high speeds, provides a strong pumping action that circulates the material being processed. The four Polytron models, powered by 1 1/2, 3, 30, and 60 H.P. motors, will process from laboratory batches of 1/2 pint up to industrial size batches of 2500 gallons.

DISPOSABLE APRONS

The Klean Kan Bag Co. is producing an apron made of heavy non woven cotton with the texture and durability of cloth at the low cost of paper. These aprons are considered to be adaptable to advertising promotions with special imprints as well as unprinted for the many applications for disposable aprons.

TUMBLE DRYER—2

A new vacuum tumble dryer-blender developed by The Patterson-Kelley Co., Inc., makes possible the drying of heat-sensitive materials in a fraction of the time required by conventional methods, according to the firm. Fast drying-in-motion is the result of a balance of jacket circulation, vapor line and filter, compact piping, condensor, vacuum line and pump, and effective controls. The P-K vacuum tumble dryer provides baffling for uniform distribution of the heating medium in the jacket. The rapid generation of vapors within the vessel reportedly have a scrubbing action on all surfaces and affect the heat transfer rate. Fourteen standard models are offered, ranging in capacities from one to 150 cubic feet.

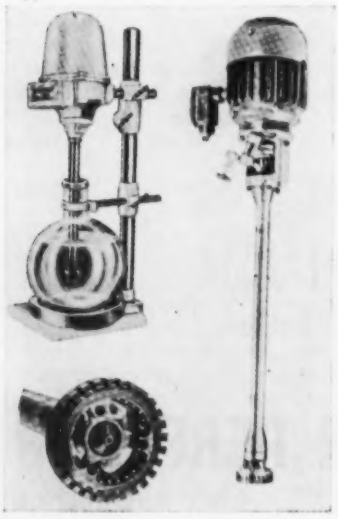
CAP REMOVER

Plinkies, a cosmetic cap remover designed to meet a daily need felt by every woman, are small pliers, fashioned expressly for a lady's hand. They come in gold, pink, green and yellow and are adorned with fabric flowers, jewels and hand detailing. Plinkies are individually packaged in a clear plastic and gold case.

BOTTLE INSPECTION—3

The Twin-Beam Bottle Inspection Machine of Mayer Production Engineers, Inc., is designed to prevent bottles containing foreign objects from reaching the consumer. According to the manufacturer, foreign objects in the bottom of bottles are instantly spotted and the bottle automatically ejected from the production line while operating at speeds up to 350 bottles per minute. Bottles that are misformed, or that have extra heavy bottoms, may also be ejected. Reportedly the machine automatically adjusts to compensate for different color glass and for variations in color shades.

1.



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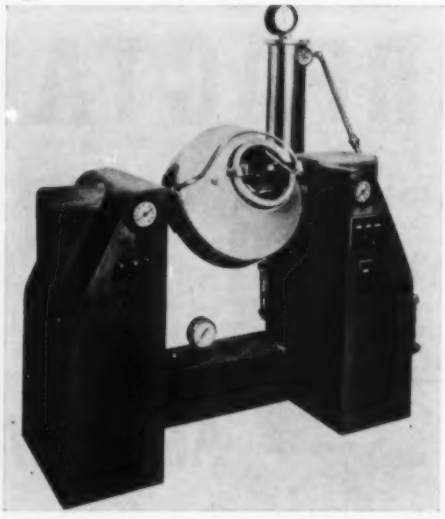

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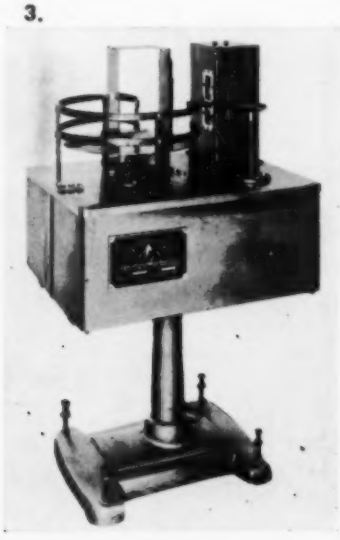

Rosottones... essences elite

now from Penick

Popular Rosottones are now included in the long line of essences offered by Penick. Like the stately rose itself, Rosottones recall the natural rose fragrance. Rosottones remain stable in all oils and are available in three price ranges, providing you with flexibility and good value.

ROSOTTONE* SUPREME

The aristocrat of rose essence . . . unique in its approach to the Bulgarian otto. Very powerful and long-lasting, it is suggested as a partial replacement for natural oil in all types of perfumes.

ROSOTTONE

Rosottone is enhanced by the natural rose undertones. It maintains excellent stability in all blends for use in cosmetics.

ROSOTTONE SAVON*

This specialty offers the famous Rosottone character in a form suitable to soap and detergent perfumery. Ideal stability in laundry and liquid soaps of all types. It will not discolor cosmetic creams and is particularly recommended for use in oil-in-water type products.

With its modest price, ROSOTTONE SAVON opens a new field for manufacturers desiring a "natural" rose effect.

We will be happy to send samples of all three ROSOTTONES. Simply attach the coupon to your letterhead.

*Trademark

PENICK

Perfume, Flavor and Aromatic Chemicals Division

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735 W. DIVISION ST., CHICAGO 10

S. B. PENICK & COMPANY
50 Church Street, New York 8, New York

Gentlemen: Please send a sample of
Rosottone Supreme Rosottone Rosottone Savon

Name:_____ Title:_____

Company:_____

Address:_____

City:_____ Zone:____ State:_____

Aerosol NOTES

by Dr. Winston H. Reed

National Packaging Show

One of the really important developments in aerosols, which should not be missed by aerosol production people, is the new Colton-Alpha rotary pressure filling equipment demonstrated at the A.M.A. Packaging Show, in New York, on May 29. This equipment has the advantage of providing high capacity with a moderate initial investment. It may mark a reversal in the trend towards refrigerated packaging that has prevailed in the industry up to now. Many experienced production people expressed very favorable comments concerning these machines.

An excellent display of both refrigerated and pressure filling equipment was also shown by Mojonnier. The unitized equipment line that Majonnier has developed is good. The units give a line flexibility when rearrangement is required. This equipment also has been well engineered as a result of much practical experience in the aerosol field.

The J. G. Machine Works had a very excellent display of their equipment. Of particular interest were the nitrogen filling units.

Other highlights of the Packaging Show were the attention-getting Food Bar, where Fluid Chemical dispensed pressurized coffee, sugar and cream, the excellent information center on aerosol products, maintained by General Chemical Co. American, Continental and Crown Can companies also featured aerosol food containers. The cute hostess at the Crown exhibit was getting much attention in her demonstrations of the many types of food products which can be pressure packed.

Vitamins, Lotions, and Metered Valves

One of the hottest developments in aerosol valves, which is rumored to be ready for emergence from the testing laboratories, is a new relatively large-volume metered Risdon valve. Sizes are available which will give a volumetric delivery of 0.15, 0.250, 0.300, 0.600, 1.00, 1.25, and 2.50 millilitres. This valve, which can be pressure or cold filled, will handle sprays, foams or creams when equipped with a suitable operator button. The 0.3 and 0.6 ml sizes meet the standard dosage volume for liquid vitamins and are catching interest by the pharmaceutical trade.

I think the 2.50 ml size, which will deliver a teaspoonful in two pushes, is a natural for cough syrup and many other medicinals. Production people will like the pressure filling feature. Potentials in the food industry for valves of this type should also be high, when large volume production brings prices down.

Powr-Pak Conn Chem, Inc.

Recent merger of Powr-Pak and Connecticut Chemical Research has drawn much interest in the trade. This consolidation of two well staffed and experienced production companies should provide a sound basis for continued growth. The Open House, held at the new plant on June 6th, was attended by many friends, including representatives of suppliers and customers. Among the many well known figures in the aerosol industry there, I saw Dr. Hamilton, of the C.S.M.A., George Hartz of John Powell & Company, Paul Torpin of M.G.K., Jean Baer of Pennsalt, Earle Kimble of DuPont, John Field, John Hulten, Rusty Husted, Art Chivvis of Carbide, Roy Ferry of V.C.A., Jack Schlossman of Aerosol Research, Earl Graham of Clayton Valve, Jack Melody of Dodge & Olcott, Lee Wallace of The Wallace Company, and John Beecher of Avon Products.

Many thanks to Ed Helfer and his executive staff for a hospitable, well-organized Open House. We wish them success in this new venture.

Aerosol Propellent Slide Rule

A handy Genetron aerosol propellent slide rule is being distributed by the General Chemical Division of Allied Chemical Corp. to aerosol fillers. The pocket size rule contains vapor pressures at 70°F of any percentage mixture of the company's Genetron 12-Genetron 11 propellent mixes. It is printed in blue and white with percentages and vapor pressures in red for easy readability. Solutions of propellents 11 and 12 constitute the bulk of propellent requirements for present pressurized products.

thurification

n. (Latin, Thurificati, worshippers who appeased the gods with gifts of incense) To perfume or make fragrant.

For the thurification of your products . . . look to the assistance of Rhodia's experienced thurifers. They stand ready to supply aromatics, compounds, specialty bases and flavors to fit your every thurifying need.

Rhodia *INC., 60 East 56th Street*
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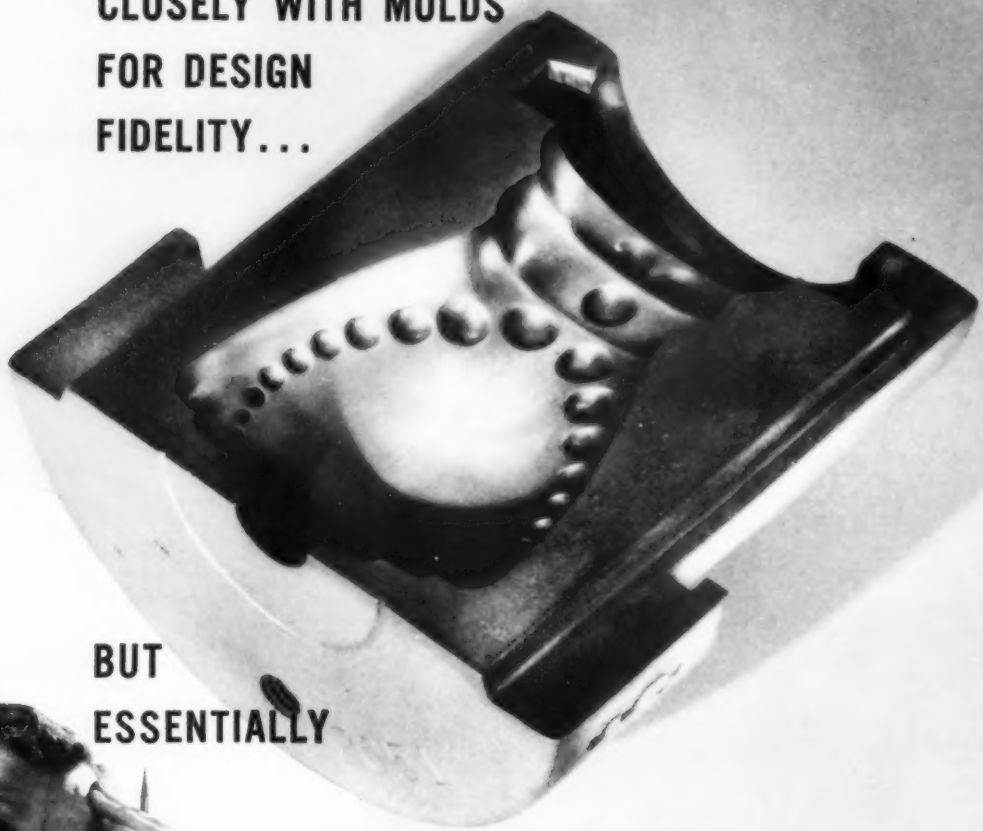
MARYLAND GLASS DESIGNERS WORK CLOSELY WITH MOLDS FOR DESIGN FIDELITY...



BUT ESSENTIALLY

Package design begins with an idea

Every craftsman knows his tools, but the creative package designer must do more—first he must bring an idea to life. An idea that says Yes to questions like: Is this container distinctive? Will it sell on the shelf? Does it pack properly, ship safely? Our design department specializes in designs that stop the eye . . . start the sale. For an affirmative solution to your design problems, contact Maryland Glass Corporation, 2147-53 Wicomico St., Baltimore 30, Md.

STOCK DESIGNS
A variety in blue or flint glass . . . in a complete range of sizes . . . is ready for immediate shipment.

PACK TO ATTRACT IN

MARYLAND GLASS

Blue or Flint · Jars and Bottles

News and Events

Perfumers Name Shuster Scientific Section Chairman

The American Society of Perfumers announced recently the appointment of Edward J. Shuster as Chairman of the Scientific Section and of the Symposium Committee for the current year. The Scientific Section meets and reports monthly to the membership recommendations on technical matters of general interest to the Society. The Symposium Committee is currently planning the next annual full-day meeting, to be held jointly with other groups in the industry,

Helene Curtis Develops a "Vanishing" Hair Spray

Helene Curtis Industries, Chicago, Ill. is introducing a unique new three-version "vanishing" hair spray and hair conditioner called Temp. The vanishing dimension is the result of a formula developed by several years of research and is stated to eliminate the "building up" of film from daily spraying. Moreover stickiness and stiffness are said to be completely eliminated; and hair may be restyled as often as desired during the day. As it does not require water to reactivate the fixative the hair may be re-combed and re-styled with a dry comb. It is available in three versions: for normal, oily and dry hair.

FRITZSCHE PRESIDENT VISITS ARGENTINE AFFILIATE

In photo above, John L. Cassullo (center), President of Fritzsche Brothers, Inc., and Mrs. Cassullo are welcomed at Buenos Aires airport by officials of the New York essential oil and aromatic chemical firm's new affiliate, Fritzsche Brothers Argentina, S.A. To left and right of Mr. and Mrs. Cassullo are: Enrique Lozano, Director of the South American enterprise, Alfonso Lopez Ayala, its President, and Dr. J. C. Tuja, another Director. Occasion for the visit was inspection and official opening of the parent firm's new facilities in Argentina.

William Black Honored by Old Friends on Retirement

William Black, chemist and perfumer for Richard Hudnut, who has retired, was given a testimonial dinner at Toot Shorr's, New York, June 17 by a host of friends and associates who have had the privilege of knowing and working with him for many years.

Frazer Sinclair was toastmaster and served to make the occasion a very interesting one, with his wit and wisdom. The affair was arranged by Arthur Gogarty of Tombarel Products Corp. and Edward Ellis of Charabot & Co.

Tributes were paid to Mr. Black by Dr. Donald Powers, Jacob Manheimer, Mr. Sinclair and Charles Pennock, president of Ciro and the Hudnut Sales Co. At the conclusion of the speeches, Mr. Pennock presented Mr. Black with a substantial gift check. Mr. Black responded with reminiscences of the early days of the company and the pleasure he had in working with his associates. John Hancock has succeeded Mr. Black in the Hudnut organization. Mr. Black spent his boyhood on a farm and it is his intention to again get close to nature on a farm where he can relax and write to his many friends.

TESTIMONIAL DINNER FOR WILLIAM BLACK

Seated at dais in testimonial dinner to William Black, left to right: Jerry Fowler, Dr. F. J. Austin, Charles Pennock, Frazer Sinclair, William Black, Joseph Smith, Dr. Donald H. Powers, Jacob Manheimer, and Gilbert Klein

Glass Container Manufacturers Meet

Among those who had leading roles in the semi-annual meeting of Glass Container Manufacturers Institute held recently at The Greenbrier, White Sulphur Springs, W. Va., were (left to right) J. E. Bellinger of Ball Brothers Co., Inc., E. F. Ball, former GCMI president and chairman of the board of directors of Ball Brothers, and Victor L. Hall, general manager of GCMI.

PowrPak-ConnChem Opens World's Largest Aerosol Plant

The world's largest aerosol plant held open house June 6, 1958 to officially announce the opening of the newly formed PowrPak-ConnChem, Inc.

The June 6th ceremonies were the culmination of the recent merger of interests of two of the industry's most successful aerosol fillers, Powr-Pak, Incorporated and Connecticut Chemical Research Corporation, both of Bridgeport, Connecticut.

PowrPak - ConnChem, Incorporated, which is the name of the two merged companies, combines the best of each of the organization's equipment and personnel. All equipment has been moved to the new quarters at 145 Howard Avenue in Bridgeport and this address is the main office for all Production, Sales and Administration.

Inside the 90,000 square feet plant there are seven aerosol filling lines giving the plant a daily production capacity of 200,000 containers per working shift, making PowrPak-ConnChem, Inc. the largest contract packager of aerosol pressurized products.

Three of the aerosol production lines are confined to the filling of general aerosol products and each of the lines can accommodate any standard size container. Separated from these three lines is another line presently under construction that will be devoted to the filling of tooth paste Exclusively.

Besides the general aerosol product filling lines there are two other production areas that are completely isolated from each other. One such area is for the filling of Pharmaceutical and Cosmetic products, and the other separated area is devoted exclusively to the filling of food products. The equipment used in the food line is stainless steel and represents the only facility of its kind on the East Coast. On the second floor of this entirely redecorated all brick building is the Research Development and Quality Control Laboratory. This Laboratory is the most completely staffed and fully equipped for the filling of aerosols. Beside the Quality Control duties and general research for new products, the Laboratory performs product reformulation services for customers.

Warehouse capacity is in excess of 5-million cans with room for an additional 1-million filled containers. Customer drop shipments are facilitated through four separate shipping platforms and a private railroad siding.

PowrPak-ConnChem Pharmaceutical Filling Line

PowrPak-ConnChem's three manufacturing divisions operate under one roof, but in complete and separate areas. These divisions produce aerosols for manufacturers of general products of the aerosol specialty type; pharmaceuticals, drugs, cosmetics and toiletries; and food products. Pictured above is the Pharmaceutical Filling Line which is housed in its own room, completely separate from all other filling lines.

Adolph Schwarz Promoted By Queen Juliana

Her Majesty Queen Juliana of the Netherlands has been pleased to promote A. Schwarz Esq., managing director of Polak & Schwarz, from Knight of the Order of Oranje-Nassau to Officer of the same Order. Mr. Schwarz has

been connected with the Polak & Schwarz concern for over 40 years. When last year Her Majesty Queen Juliana visited the Zaandam factory, which is also the head office of the concern, Mr. Schwarz had the honour of showing Her Majesty around.

Canadian Toilet Goods Assn. Elects New Officers

The following new officers have been elected by the Toilet Goods Manufacturers Assn. of Canada: President, J. I. Stampleman, Gillette of Canada Ltd.; First Vice President, F. R. McCallum, Lehn & Fink, Canada Ltd.; Second Vice President, Gordon Scrage, J. B. Williams Co. (Canada) Ltd.; Third Vice President, James M. Shaw, Noxzema Chemical Co. of Canada Ltd. Mrs. Agnes Howard was re-elected executive secretary and treasurer and K. J. Eccles, Roy C. Lewis Co. Ltd. was elected honorary treasurer. Fred McBrien, Brisol-Myers Co. of Canada, Ltd. was elected honorary secretary.

Construction Started on Max Factor's New Plant

Max Factor & Co. has officially started construction of its major Southern California cosmetics manufacturing plant and warehousing facilities on the newly acquired 13 acre site in the Holly Park Industrial Center of Hawthorne, California.

Breaking the first ground at the building site were Max Factor, president, Davis Factor, chairman of the board, and Victor Zaccaglin, mayor of Hawthorne. Also taking part in the ceremonies were Max Firestein, executive vice president of Max Factor & Co., Albert Martin, Jr., partner of Albert C. Martin and Associates, architects and engineers who resigned the new plant, and Ernest W. Hahn, contractor for the new building.

The plant will be a Class 1 fireproof structure of modern design, occupying 215,000 square feet with mezzanine, and is expected to be one of the most beautiful manufacturing show places in California. The building will be of structural steel, tilt-up concrete panels, and concrete block. It will have acoustic ceilings and air-conditioning. An especially designed pattern, based upon Max Factor's exclusive star design, will be incorporated onto the concrete block screen on the west wall of the building. The screen protects a facade of 200 feet of glass wall. The exterior will feature acqua-toned fluted steel siding to produce an exterior color scheme of off-white, tan, and aqua. Landing docks, protected by canopies, will service incoming and outgoing traffic.

The plant will feature specially designed cosmetic manufacturing equipment and production line packaging facilities, and provide ample space for utmost working comfort and efficiency. It will also have a completely equipped machine shop and maintenance department, as well as a carpenter shop and first aid quarters with a registered nurse in constant attendance.

Every feature of the new plant has been designed to provide employees with the most pleasant working conditions and modern conveniences. Spacious locker rooms and employee lunch room facilities also are being provided within the building.

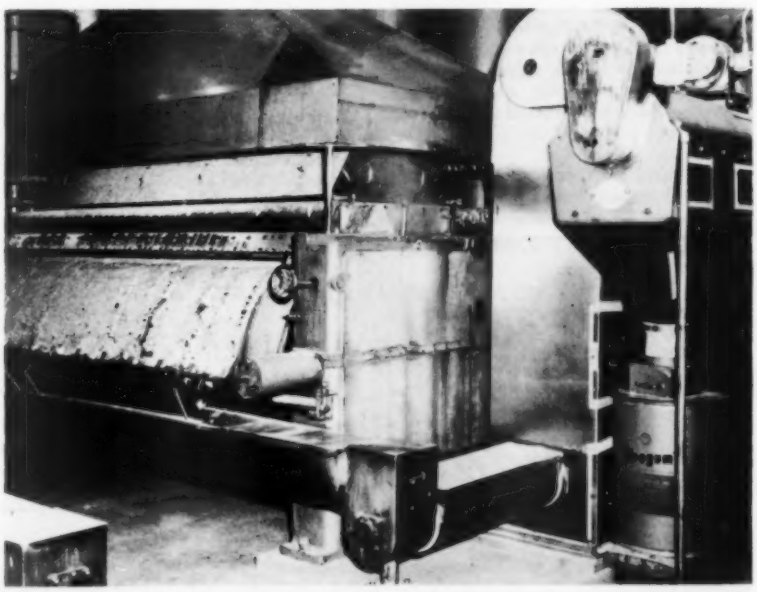
New Plant Triples Veegum Production Capacity

The Specialties Department of the R. T. Vanderbilt Co. is now in full production and operation at a new plant. The structure was completely rebuilt to meet the needs of the department, and all process equipment is of special design, for the manufacture of Veegum. The building now contains approximately 35,000 sq. ft. of floor space. The second floor of the new plant is utilized for offices, a library, and laboratory facilities. The first floor area was redesigned to accommodate the machinery and equipment needed for the processing and storage of Veegum. All process equipment is custom designed, and fabricated of stainless steei.

MAX FACTOR BEGINS CONSTRUCTION

Max Factor & Co. started construction of its major Southern California manufacturing plant and warehousing facilities in Hawthorne as company and local officials take part in ground-breaking ceremonies. Breaking first ground (l. to r.) Davis Factor, chairman of the board; Max Firestein, executive vice president; Victor Zaccaglin, mayor of Hawthorne; and Max Factor.

Custom Equipment Speeds Veegum Production



Veegum, in sheet form comes from Blaw-Knox double drum dryer, and is fed to Mikro-atomizer. Finished product is discharged into shipping container at right.

JOHN H. BRECK AWARDED DOCTOR OF SCIENCE DEGREE

John H. Breck, 81, founder and Chairman of the Board of John H. Breck, Inc., was recently presented with an honorary doctor of science degree by American International College of Springfield (Mass.). In the photo Mr. Breck is shown immediately following the award ceremonies with members of his family consisting of Edward J. Breck (left) his eldest son and president of John H. Breck, Inc.; Miss M. Constance Breck, his eldest daughter and treasurer of the firm and John H. Breck, Jr.; the company's executive vice-president and also a graduate of American International College.

NBBMA Annual to be Held in Chicago

The 17th Annual Meeting of the National Beauty and Barber Manufacturers' Association will be held in The Towers, Conrad Hilton Hotel, Chicago, on Wednesday morning, August 20th, during the Institute's Dealers Show.

The meeting will be highlighted by reports on NBBMA's activities during the past year.

In addition to electing officers and directors for 1958-59, NBBMA members will be afforded an opportunity to participate in a discussion from the floor on timely subjects and problems directly affecting manufacturers of beauty or barber shop supplies and equipment.

The Board of Directors Meeting will follow the regular meeting.

Bjorksten Laboratories Establishes Swiss Affiliate

Dr. Johan Bjorksten has announced the establishment of a Swiss Corporation, Bjorksten Basel Operations, Ltd., Lautengartenstrasse 12, Basel, Switzerland. This organization will be devoted principally to market studies pertaining to the common market in central Europe and related problems. Dr. Bjorksten is in personal charge of this operation.

Richard L. Hanson

Richard L. Hanson, president of the National Wholesale Druggists Assn. and district vice president of McKesson & Robbins Inc. died in Grand Central terminal New York from a heart attack July 1. He was 59 years of age.

Henry H. Eickmeyer Off to Europe

Henry H. Eickmeyer

Henry H. Eickmeyer of Schimmel & Co., Inc. left on July 7th on a trip to England and Europe. He was accompanied by Mrs. Eickmeyer. They expect to return in early August.

Perle Mesta Wins New Horizons

At the Inter-American Ball for benefit of United Cerebral Palsy in Washington May 23, Parfums Ciro donated a 32 oz. bottle of imported New Horizons Perfume for a door prize which was won by Washington's famous hostess Perle Mesta. Olivia de Havilland, guest of honor, presents the bottle to Perle.

Prof. Steffan Arctander and Dr. Ernest Theimer to Lecture

Prof. Steffan Arctander, Colgate-Palmolive Co. Inc., and Ernest Theodore Theimer, Ph.D., van Ameringen-Haebler, Inc., address Rutgers class on perfumery.

Rutgers to Continue Course in Perfumery and Essential Oils

Rutgers University's first experiment with teaching perfumery on a scientific basis in evening college classes during the 1957-1958 academic year has been termed successful by the University and students alike.

With a waiting list of 30 who could not be accommodated in the first class, Rutgers plans to reoffer in Newark in the fall of 1958 its Perfumery and Essential Oils course and to introduce a new subject in Chemistry of Perfume Materials. During the spring term of 1959, an Advanced Perfumery and Essential Oils course will be added.

The fact that New Jersey conducts an annual $25,000,000 perfume business with chemists, pharmacists, perfumery technicians and assistants seeking substitutes for hard-to-get essential oils and new advances in compounding, helped in no small way to supply the demand for perfumery instruction.

Also playing a large role in the success of the project were the combined efforts of the University, faculty, and perfume industries to establish a going educational program in perfume chemistry and compounding.

Several New Jersey and New York perfume manufacturers and suppliers provided a subsidy to help launch the new program. They included Givaudan-Delawanna, Inc., Hoffman-LaRoche, Inc., Firmenich, Inc., Leonhardt Foundation, Inc., Norda Essential Oils and Chemical Co., Inc., S. B. Penick & Co., Shulton, Inc., The Trubek Laboratories, van Ameringen-Haebler, and Verona Chemical Co.

Dr. Donald B. Denney, a member of the Rutgers faculty, taught the terpene chemistry, and Steffen Arctander, internationally known perfumer, perfumery raw materials and their application. Dr. Denney joined the Rutgers faculty in 1955. He had previously taught at Yale and worked for duPont in Wilmington, Delaware. Mr. Arctander served as a chief chemist and perfumer for a Danish perfume material manufacturer before coming to Colgate Palmolive Co. in 1957. In his quest for essential oils, spices, medicinal plants, and other raw materials, he made many trips to interior Africa.

The terpene chemistry course covered the chemistry of terpenes and their reactions, properties, and synthesis.

Upon completion of the fundamental chemistry part of the subject, the second term was devoted to perfume materials and their compounding. This phase included both lecture and laboratory sessions on the production and application of essential oils, balsams, resins, and other materials needed in the compounding of perfumes as well as the production of synthetic materials and substitutes.

Industries at home and abroad furnished several hundred authentic samples of much needed raw materials. Among the U. S. suppliers were Givaudan-Delawanna, the Rutgers School of Chemistry, J. Manheimer, Robertet, Inc., Albert Verley Co., Inc., and Hoffman-LaRoche.

To show materials for special effects, Flebo in Holland supplied Angelica oils, celery seed oil, carrot seed oil, coriander, and black pepper oil. Payan & Bertrand sent many of their specialties, the most popular being Flouve. Stafford Allen & Sons supplied some of their spice oils, such as cinnamon bark oil, pimento berry oil, and cardamon oil. Mr. Arctander, himself, loaned 60 samples he had collected from recent trips to Africa, Madagascar, and Reunion.

In addition, several noted leaders in the perfume industry served as guest lecturers, including Dr. Henri Gribou, vice president of Dragoco, Inc. who discussed the application of fixatives in perfuming; Dr. Ernest Guenther, vice-president of Fritzsche Brothers, Inc. who discussed essential oil production in the Belgian Congo, Zanzibar, Reunion Island, and the Comores; and Dr. Ernest Theimer, director of research for van-Ameringen-Haebler, Inc. who reviewed perfumery production and control of synthetic chemicals.

Details regarding the perfumery classes to be conducted by Rutgers University during the forthcoming year may be secured from George Tapper, Newark Center, Rutgers-The State University, 53 Washington St., Newark, N. J.

Adult Education Courses in Cosmetics and Perfumery

Courses in cosmetics and perfumery will be given by Frank J. Steele, Ph.D., Chief Pharmacist of the Greenwich Hospital, Greenwich, Conn., at the Adult Education Night School in the Greenwich High School, starting in September.

The cosmetic course will start in September and will include: early history, creams, lotions, sun tan preparations, face powder, rouge, lipsticks, dentifrices, make-up, shampoos, shaving preparations, depilatories, antiperspirants, baby toiletries, aerosol preparations, and others.

The course in perfumery will follow the course in cosmetics and will include: early history, facets of perfumes, types of perfumes, odor classification, the commercial perfumes, such as: French, English, American, and others.

These courses are designed to be an aid to those in the field, and to assist those that are seeking positions. Consideration will be given on how to sell cosmetics and perfumes, and related items.

Cosmetic preparations and perfumes will be shown to the class so that each student may have the opportunity to see, feel, smell and handle such products.

Visual aids, classroom discussion, lectures, and demonstrations will be held during each session.

Charles of the Ritz Opens Lavish New Salon in New York

The new Charles of the Ritz Park Avenue Salon at the corner of 57th St., New York was opened June 19. A host of interested visitors in the industry and other guests who attended the opening were greeted by President Richard Salomon and other executives of the company. The salon was inspected with much interest. Good taste was evident everywhere: in the choice of the furniture, in the arrangement of the booths and in the conveniences available for patrons. The equipment was well chosen. As a whole the salon had the atmosphere of luxury where women could relax and be pampered from head to toe by skilled operators.

William D. Barry Honored at Dinner

William D. Barry, vice president of Mallinckrodt Chemical Works, was the guest of honor at a dinner tendered by approximately seventy-five of his friends to mark the completion of 50 years of service with the company. The dinner was held at the Union League Club, New York, June 9.

Those at the dinner, as well as many who could not be present, contributed a very substantial sum of money to set up the New York Chapter of the Assn. for the Help of Retarded Children, Inc., May Barry Fund. Mr. Barry's wife spent her life teaching and aiding mentally retarded children.

CIBS HEAR ADDRESS ON ATOMIC ENERGY RESEARCH

At the CIBS' meeting, June 12, at Toots Shor's, New York, N.Y., Gordon R. Molesworth, president, Molesworth Associates, was the guest speaker. He was with the U.S. Atomic Energy Commission in charge of all public relations and public education activities at the Oak Ridge installation, prior to forming his own concern. Mr. Molesworth's topic was "Atomic Energy and Industry, with applications to cosmetic research." Shown after the meeting (l to r)— Eugene C. Roberts, CIBS' Treasurer; Mr. Molesworth; William Jaeger, CIBS' President, and Allen T. Stewart, CIBS' Corresponding Secretary.

Son of Albert Stasse Married in Brussels

Albert Anthony Stasse, son of Albert Stasse, president and founder of the Stassal Co., New York, was married June 26 in Brussels, Belgium to Miss Lilicane Lazard. During World War II young Mr. Stasse served in the Air Force as an interpreter for the unit. Mr. and Mrs. Albert Stasse attended the wedding and also spent some time at the Brussels Fair.

Elizabeth Arden Awarded Honorary Degree

Elizabeth Arden was awarded the Honorary Degree of Doctor of Humane Letters by Nasson College of Springvale, Maine at Commencement exercises held by latter on June 9. On June 6, Bates College in Lewiston, Maine, conferred upon Miss Arden its annual Distinguished Citizen Citation.

These two awards are the most recent in a long series of honors.

Dr. and Mrs. Joseph Felton Now on European Tour

Dr. and Mrs. Joseph Felton as they sailed on the S/S Flandres on May 7 for an extended tour of Europe. During this trip they will visit Felton representatives in all Western European countries, the major portion being spent in France, consulting with Leon Gefen, manager of Felton's Versailles plant. An extensive expansion program in connection with Felton's French plant is now under consideration. They are scheduled to return in August.

Jerome Samet

Jerome Samet packaging engineer for the Lehn & Fink Products Corp. died from a heart attack after returning from his vacation June 21. He was 58 years of age.

Tribute to Irving Bennett by Stuyvesant Alumni Assn.

Irving Bennett, vice president of the Syntomatic Corp., New York, was paid an unusual tribute by the Stuyvesant Alumni and Scholarship Assn. at its fifth annual dinner May 28, in the Belmont-Plaza Hotel in New York, when he was made an honorary member of the association. The presentation of the honorary diploma was made by Dr. Irving C. Fischer, president of the alumni association. Mr. Bennett was the second one to have honorary membership conferred on him—the first was Gen. David Sarnoff, president of the Radio Corp. of America. Between three and four hundred alumni attended the dinner.

Dr. William Hosler

Dr. William Hosler, of Plough Inc., Memphis, Tenn., died June 9.

OBITUARY

George J. Tombak

George J. Tombak, president of Renaud Ltd. New York, N.Y. died from a cerebral hemorrhage while on the way from his office to his home in Port Washington, N.Y. June 23. Mr. Tombak had been associated with the raw materials industry for many years. He was with H. C. Ryland Inc. and subsequently for 21 years was a sales executive with the aromatic chemicals division of E. I. du Pont de Nemours & Co. after which he established the American branch of Renaud Ltd. of which he was president. Within the past year he was joined in the company by Adolph Dingfelder who is now president. The company will continue under his direction.

Mr. Tombak was a charter member of the American Society of Perfumers and served as its president some years ago. He was also active in the affairs of the Essential Oil Assn. of the U.S.A. as was also his successor Adolph Dingfelder. Mr. Tombak is survived by his wife, two daughters and a son.

Lincoln Young

Lincoln R. Young, vice president of the Virginia Dare Extract Co., Brooklyn, N.Y. died recently.

Clinton Odell

Clinton Odell, chairman of the board of the Burma Vita Co. of Minneapolis, Minn. died recently.

SPOTLIGHT News...

The first convention of the National Beauty & Barber Manufacturers Assn. separate from any trade show, will be held at the Concord, Kiamesha Lake, N. Y. May 21-24, 1959. Warren Freedman of Clairol Inc. is the chairman of the convention committee and has already prepared a tentative activity program for the meeting.

A new liquid form of Lustre Creme shampoo was introduced nationally in June by the Colgate-Palmolive Co. Embodying a non-drying formula containing lanolin the new product is said to be the result of five years of product tests and three years of consumer research.

The price of Fresh Roll-on ballpoint deodorant manufactured by Pharmacraft Corp. has been reduced from $1 to 69¢.

Revlon Inc. introduced its new Hi-and-Dri roll-on deodorant nationally June 10, when a multi-million dollar advertising promotion was started.

Expansion of the Toni Co. into the hair accessories field is the first departure of the company from the manufacture and sale of permanent waves and other toilet preparations. The Toni Co. div. of the Gillette Co. is now offering a line of hair brushes, combs, nets, bobby pins, barrettes, headbands and curlers in the midwest. National distribution is to follow.

Papain, free from undesirable impurities, filterable and containing less moisture than crude papain which contains inactive and insoluble substances, insect fragments and foreign organic matter is now available from the Meer Corp., New York, N. Y. The purified papain is the result of a new process developed by the company's research laboratories, and is stated to be desirable for compounding cosmetics. The purified papain is a white to cream colored powder having a characteristic odor. It is said to be easy to use and produces dependable results.

Lehn & Fink div. of Lehn & Fink Products Corp. has established new discount terms. As a means of cooperating with and of being of help to its customers the company gives its customers until the tenth of the month following their invoice dates to be eligible for its two per cent cash discount and net payment is not due until the 30th of the month following their invoice date. Products affected by the new discount terms are Lysol disinfectant, Hinds Honey & Almond cream, Henna San Hair Rinse, Etiquet deodorants—cream, stick and pink stick; new Rolit Lygel Jelly, and suppositories.

A testimonial dinner to Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc. was tendered by the East River Savings Bank, one of the most substantial financial institutions in the city in celebration of his fortieth year as a trustee of the bank. The energetic Mr. Magnus, who served as president of the New York Board of Trade for many years is also active in numerous charitable and civic activities.

The Society of Pharmacists in Industry has been organized by pharmacists from New York, Pennsylvania, New Jersey and Connecticut to promote the profession of pharmacy and a closer relationship among pharmacists in industry. Walter G. Fredell, Lambert-Hudnut Div. of the Warner-Lambert Pharmaceutical Corp. is president.

The coveted title of Miss Universe will be awarded in the spectacular Miss Universe Beauty Pageant of 1958 in Long Beach, Calif. to be held from July 17 to 27. In addition to 45 entries from the United States there will be 41 from foreign countries. As co-sponsor of the event Max Factor & Co. will award the cash prizes totalling $15,400 to the winner and runners up.

Offices in the same building where John H. Breck Inc. was founded in 1929 are still maintained by John H. Breck, now 81 years of age. From this office every business day Mr. Breck supervises the activities of the corporation he founded, which now occupies a large modern plant and offices.

Current scientific and technical material which has been translated into English from all languages, including Russian, on printed catalog cards is now available on a subscription basis from the Special Libraries Assn. Translation Center, located at the John Crerer Library, 86 E. Randolph St., Chicago, Ill.

The glass container industry is now a billion dollar business. In 1957 it shipped 20.2 billion units, enough to supply every person in the United States with 118 bottles or jars. The dollar volume of the glass containers shipped was $784,000,000. Adding to this some $284,000,000 in closures brought the glass container industry into the billion dollar category.

Three college beauty queens selected as finalists from beauty queens of 78 colleges and universities in the United States have been selected to compete in a nationwide contest sponsored by the Campana Co., Batavia, Ill. The winner of the contest will be featured in the national promotion of its make-up.

PERSONALITIES

Glenn A. Mengle was elected president of the Glass Container Manufacturers Institute, Inc., at a meeting of

Glenn A. Mengle

GCMI's board of trustees recently. Mr. Mengle is chairman of the board of the Brockway Glass Co., Inc.

James Wright has been appointed Bourjois representative for the territory covering Pennsylvania, New Jersey and Delaware. Mr. Wright most recently serviced this territory for Northam Warren, Inc.

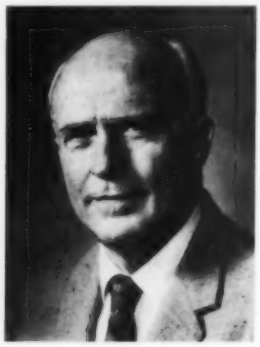
Walter A. Munns was elected president of Smith Kline & French Laboratories recently, succeeding Francis Boyer as chief executive officer.

Alexander S. Dubenchiek, who is celebrating his twentieth year in the essential oil industry, has been appointed

Alexander S. Dubinchiek

by Felton Chemical Co., Inc., to head their Essential Oil and True Fruit Flavor Research Laboratories. Mr. Dubenchiek is a veteran member of the Scientific Committee of the Essential Oil Assn. of the United States, where he has been chairman of several committees engaged in establishing standards for essential oils.

William C. Lytle has been elected a vice president of the Atlas Powder Co. Mr. Lytle will be in charge of the com-



William C. Lytle

pany's Explosives Division and assigned corporate staff activities. He was made manager of the Explosives Division's research division in 1945, becoming assistant to the general manager of the Explosives Division in 1952, and general manager in 1954.

Lloyd Fosso has assumed his new duties as associate sales representative for the West Coast territory of Charles of the Ritz. Mr. Fosso was formerly the firm's New York Metropolitan Area sales representative.

Dr. Herman Sokol was recently named executive vice president of Heyden Newport Chemical Corp., according to an announcement by Simon Askin, president.

L. C. Hallett

L. C. Hallett has been appointed vice president of sales of Bourjois, Inc. He has served Bourjois in the capacity of sales representative for the past fifteen years. Prior to this tenure, Mr. Hallett was associated with Harriet Hubbard Ayer and Lentheric.

William Hayes has been appointed Field Sales Manager, a new position, for the Toiletries Division of Shulton, Inc.

William Hayes

He will assist Richard Parks, vice president for sales, in administrating and coordinating sales, with special emphasis on field activities. Mr. Hayes joined Shulton in 1946 as a sales representative in the New England area.

Dr. Alfred de Waldkirch, Production Manager of L. Givaudan & Cie, S.A., Vernier-Geneva, Switzerland, recently paid an extended visit to the plant of Givaudan-Delawanna, Inc. His visit is a part of the continuous program of technical cooperation between the various companies of the international Givaudan organization.

Dr. de Waldkirch joined Givaudan in Geneva in 1925. During 1927 and 1928 he visited Delawanna for the first time

Dr. Alfred de Waldkirch

and assisted in the setting up of expanded production facilities in the new Givaudan plant in the United States. He was appointed to his present position in 1943 and can look back over thirty-three years of uninterrupted activity during which he has actively participated in the continuous expansion of the world-wide Givaudan organization.

Dr. J. Hilary Herchelroth, proprietor of Oracle Laboratories, New York, who was recently accepted as an accredited

Dr. J. Hilary Herchelroth

teacher of metaphysics by the International New Thought Alliance has been appointed leader of a group of advanced students of metaphysics of Dr. Ervin Seal of the Church of Truth (Carnegie Hall). Dr. Herchelroth took part in the 43rd Congress of the INTA in New York June 29-July 4. As is well known Dr. Herchelroth is a director of the American Society of Perfumers.

S. LeBaron Smith has been named sales manager of Tussy Cosmetics according to an announcement by Paul Carey, vice president of Lehn & Fink Products Corp., parent company of Tussy.

W. Richard Lloyd who recently visited Polaks Frutal Works to discuss business conditions and familiarize himself with American methods of operating has joined Soflor Ltd. an associated company in England, as general manager. During World War II Mr. Lloyd was attached to the staff at Gen. Eisenhower's headquarters.

Bernard d'Escayrac, president of the 130 year old French perfume house of Guerlain, was decorated with the Cross of the Chevalier of the Legion of Honor by M. Jacques Baeyens, French consul general in a ceremony at the French consulate June 15. Mr. d'Escayrac served with distinction in both World Wars. He has been associated with Guerlain for over 30 years and has resided in New York since 1927.

Danute Pajaujis, perfumer with Firmenich Inc. New York, is in Switzerland for a visit to the parent organization, Firmenich et Cie, Geneva. She is accompanied by her husband V. Anonis with whom she will tour Italy and France before returning to New York.

Xavier Serra, president of Dana Perfumes Corp. left June 18 for a trip through Venezuela, Brazil, Uruguay and Argentina where he was joined by Mrs. Serra and then both flew to France where they visited their daughter Maria Dolores who was married last April. Their son is still in college. While in New York Mr. Serra greeted a host of guests at the opening of his company's attractive new sales office and showroom at 1 E. 54 St.

Joseph M. McDaniel, Jr., executive secretary of The Ford Foundation, was elected a director of Lehn and Fink

Joseph M. McDaniel, Jr.

Products Corp. He is also a director of the American Seal-Kap Corp. and a trustee of Johns Hopkins University. Prior to his association with The Ford Foundation, he was Dean of the School of Commerce at Northwestern University.

James D. Russo has joined the organization of Aerosol Techniques, Inc., Bridgeport, Conn.

Gerald McGee, west coast representative of the George W. Luft Co. Inc. was presented with a gold watch by General Sales Manager John N. Carroll at a dinner recently given Mr. McGee in celebration of his twenty-fifth anniversary with the company.

Roland Vigue has been named sales supervisor for the Consumer Dept. of the fine chemicals division of Shulton, Inc.

Francis Boyer, chairman of the board of Smith, Kline & French Laboratories, has been elected to a six year term on the Harvard University board of overseets. Mr. Boyer was graduated from Harvard in 1916.

Charles Arnold has been appointed regional vice president of sales for the eastern territory of Lanolin Plus Inc.

Irving A. Schlakman, former chairman of the house committee of the New York Chapter of the Society of Cosmetic Chemists is now assistant to the president of Bard Pharmaceuticals Inc., Yonkers, N. Y.

Walter Wynne, chief of the cosmetic research laboratories of Givaudan-Delawanna Inc., New York, was married May 11 to Mrs. Ethel Foernsler at St. Gerards Church, Hollis, L. I. Mr. Wynne is well known in the industry as an author of technical papers and as chairman of the committee of arrangements of the Society of Cosmetic Chemists.

Harold Hutchins, popular promotion genius of Redbook Magazine and publisher of the informative Drug & Cosmetic Newsletter is home from Mt. Vernon hospital, recuperating from a severe case of pneumonia.

Richard E. Marsh has been appointed advertising manager of the Northam Warren Corp., for the continental United

Richard E. Marsh

States and Canada. For the past two years Mr. Marsh has been account executive with Sullivan, Stauffer, Colwell & Bayles Advertising Agency.

Gilbert F. Klein has been promoted to the newly created position of Sales Promotion Manager for DuBarry, Sportsman and Richard Hudnut products, according to an announcement by Gerard S. Fowler, vice president of the Family Products Division of Warner-Lambert Pharmaceutical Co.

David Ward has been appointed as Assistant Sales Manager for the Toiletries Division of Shulton, Inc. Mr. Ward joined Shulton in 1954 as a sales representative in the midwest territory.

Robert J. James has become a project leader of the Shulton Toiletries Division. Mr. James was formerly associated with Chesebrough-Ponds as a Cosmetic Research Chemist, where his work engaged him in a variety of cosmetic lines.

Eleanor M. Weisbrod has joined the Toiletries Division of Shulton, Inc. as a Research Chemist. Miss Weisbrod was formerly associated with the Andrew Jergens Co., where she was in charge of the Quality Control Laboratory.

Arvid Willen

Arvid Willen has been appointed by the Alsop Engineering Corp. to its sales engineering staff and will operate direct from the main office in Milldale, Conn.

Week Ender Set By Mary Chess

To meet the need for a small and compact container with all the necessities for the week-end, Mary Chess has introduced this set which contains a small cake of soap, two vials of Bath Essence, a bottle of Toilet Water and a small shaker of Dusting Powder, each fitted into its own compartment, in a gold embossed paper-covered box. Retail price is $3.50 plus tax.

Western Packaging Exposition To Be Held Aug 11 thru 13

The Western Packaging and Materials Handling Exposition will be held in the Civic Auditorium in San Francisco August 11 thru 13. More than 150 manufacturers will display the most recent improvements in materials, methods and equipment, according to Clapp & Poliak, producers of the show.

Two New Australian Aerosol Products

Two new aerosol products now on the consumer market in Australia are Rilling Mystic Net, a spray-on hair net, and Sombrero Sun Tan Lotion. Both products feature valves and actuators made by National Radiators, Ltd., Australian licensee of The Risdon Manufacturing Co., Naugatuck, Conn. The actuators give a horizontal spray and their molded-on skirts cover the cup recesses to improve the overall appearance of the packages.

MARKET REPORT

Mexican Beans Jumping

While declines carried prices on Formosan citronella, lemongrass, linalool, and various linalyl esters to new low levels, and a sharp drop occurred in technical grade acetophenone, mint oils turned in firmer. The upward price trend in vanilla beans was extended with the overall statistical position of the market suggesting further advances in the last half of the year. Shortage of orange oils promises to become more acute as summer demands for the account of the of the food, beverage and confectionery trades press more heavily on the market. Vanillin prices scored gains of 15c per pound on higher costs.

PRICE CHANGES

ADVANCES	CURRENT	PREVIOUS
Oil lime, distilled	$6.55	$6.25
Oil ocotea cymbarum	0.52	0.50
Oil rosemary, Spanish	1.05	0.95
Oil spearmint	4.50	4.00
Vanillin (resale)	3.25	3.10
Ethyl vanillin (resale)	74.0	7.05
Vanilla beans		
Mexican, whole	10.25	9.50
Mexican, cuts	10.00	9.00
Bourbons	10.00	9.00
Oil Peppermint		
Natural	4.50	4.40
Redistilled	4.90	4.80
DECLINES		
Oil bois de rose (rosewood)	$2.15	$2.25
Oil Cananga, rectified	8.85	9.00
Oil cedarleaf	3.10	3.50
Oil citronella, Formosan	0.65	0.75
Oil eucalyptus, 70-75%	0.63	0.65
Oil Ginger	11.25	12.50
Oil lemongrass	1.00	1.05
Acetophenone, tech, less carlots	0.37¾	0.75
Linalool	3.10	3.25
Linalyl acetate, 90-92%	3.25	3.40
Balsams		
Peru	1.30	1.40
Tolu	3.30	3.50

Prices per pound unless otherwise specified.

VANILLA BEANS ADVANCING—

In addition to advances of 75 cents to a dollar per pound, trade observers, basing their predictions on the overall supply position of the market, predict still higher prices for the future. Stocks in Madagascar have fallen below 125 tons. Mexican beans have likewise been tending upward in sympathy with the advances in Bourbon beans as well as depleted stocks from the smaller crop this year. In addition to the current strong statistical position, advices from Madagascar state that the coming crop will not exceed 300 tons. In the past few years the crop has amounted to 400 tons.

CITRONELLA AT NEW LOW—

Following a brief period of stability, fresh declines were noted in Formosan citronella oil carrying quotations to a new low on the downward trend that has featured this article for many months. The declines, which in the opinion of some trade factors, have already been extended too far, eventually may result in a cycle of rising prices. This has already become apparent in Guatemala where very little oil is being distilled. Farmers are unwilling to cut the crop due to low monetary returns.

VANILLIN PRICES RISE—

While high costs of manufacturing, packaging, labor and transportation were in some measure responsible for the boost of 15 cents per pound in vanillin and a 35 cent a pound advance in ethyl vanillin prices, advances in the competing product, vanilla beans, from which natural vanilla is made, likewise served to have an influence on vanillin from which the synthetic flavor is made. Lignin vanillin is used in the food industry for its imitation flavor properties.

ACETOPHENONE SLASHED—

The price of perfumers grade acetophenone has been seriously threatened as the result of the deep cut in the price of technical grade. Less carlot quantities of the technical grade were reduced from 75 cents to 37 ¾ cents per pound, or more than 50 percent. The lower prices, it is believed, may tend to encourage new uses for the article which had previously been ruled out because of a high cost.

CITRUS OILS TIGHTENING—

While spring business for the account of the beverage trade proved rather disappointing because of unfavorable weather conditions, shortages of a number of citrus oils were noted. The tightness in orange oil for many months has served to place a heavier demand on some of the other oils including lime, and lemon. Distilled lime oil prices were bosted to the basis of $6.55 to $6.75 per pound. Grapefruit likewise displayed considerable strength. Opening of the vacation period is expected to be reflected in more pressing demands for the account of soft drink manufacturers.

LINALOOL REFLECTS LOWER COSTS—

Renewed weakness in bois de rose resulted in a further decline in the chemicals derived from the oil, namely linalool, linalyl acetate and some of the other esters. Linalool declined to $3.10 to $4 per pound while lower prices for 90-92% linalyl acetate ranged from $33.25 to $4.15 per pound.

GERANIUM OIL STRONG—

The storms in the Island of Reunion some months ago as well as the recent turn in internal conditions in Algeria all served to have a strengthening influence on geranium oils. Prices on Algerian oil became virtually nominal as local importers found that they were without firm offers from the primary center. Some dealers boosted prices on Algerian geranium by as much as $1 per pound for the limited quantities of unsold oil on spot or to the basis of $17.50 per pound.

MORE GLYCERIN IN SIGHT—

With domestic buyers showing considerable resistance to the late advance in domestic prices for crude, a rather substantial tonnage of foreign material has been purchased. According to reports increasing quantities should be arriving here in the next month or two. The goods will come from several countries including Japan, and Argentina. Prices for refined material remains steady. The recent decline in stocks has resulted in a feeling of stability regarding the outlook in refined material over the balance of the year.

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—NEW FORMULATIONS CONTAINING LANOLIN SPECIALTIES . . . by Maison G. deNavarre
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—EMULSIFYING PROPERTIES OF LANOLIN DERIVATIVES . . . by Lester I. Conrad
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